The Insider Goes Deep into the Spectrum

A quest to get the Megabits promised and paid for, "one sweet megabit at a time"

Yet Another novel by Lefty Insider

The Insider Goes Deep into Spectrum

Target Market

This novel is targeted primarily to a demographic of 10 million college educated Baby Boomer aged men who are working in, or have worked in, the IT fields. The proposed goal of this manuscript is to reach one percent of this market, most of whom are not inclined to use social media, and find pdf files more accessible and readable than poorly formatted and weakly illustrated eBooks.

Acknowledgements

Those involved in the creation of this book, know who they are and are much appreciated by this author.

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This book is a work of historical fiction. Apart from the well-known actual people, events, and locales that figure into the narrative, all names, characters, places, and incidents are products of the writer's imagination or are used fictitiously.

This author has serialized much of this novel, not through Substack or other outlets, but by email to the real undisguised recipients in the To:, Cc: and Bcc: fields of the correspondence.

About the Author

I was born and raised in rural small town Wisconsin. I am a veteran of the US Army U.N. Peace keeping force in South Korea, a former Peace Corps volunteer in West Africa, and former Illinois and Wisconsin secondary and post-secondary school teacher. I hold a BS in Education degree (Vocational and Technical Education) from the University of Illinois-Champaign/Urbana and an online Master's Degree in Adult Education from Univ. of Phoenix/Capella University.

Following and during my teaching positions, I was involved in corporate technical service training and course development for International Harvester and JI Case companies taking me to North Dakota and Illinois. I have lived in three countries on three continents and in five states.

My very first online connection, circa 1988, was with a 2400bps dialup connection to the ExecPC Bulletin Board System or BBS, in Milwaukee and eventually to CompuServe via Racine, Milwaukee, and Chicago modem numbers. I went at significant expense, wherever the modem speeds were fastest. My very first Internet connection circa 1992 was a 9600bps dial-up connection via an 800 phone number to Spry in Seattle and later via CompuServe. My second Internet connection was with the Microsoft Network (MSN) with a free account as a Windows 95 beta tester via 64/128kbps ISDN circa 1995. My third Internet connection was with Wisconsin Bell with a 256kbps DSL connection circa 1998.

I created and ran a 400-customer 56k dialup (with a Broadband Wireless backhaul) Internet Service Provider or ISP called BridgeNet; I also designed and built a Wireless Broadband Internet Service Provider or WISP. I have also connected to the Internet over the years with Broadband Point-to-Point Wireless (both urban and rural), T1's, 128-512Kbps DSL, and over time via advertised 30-400Mbps cable connections. (10 to 100Mbps actual)

I began beta testing versions of the MS Windows software, beginning with the multimedia extensions and Video for Windows 3.1, (1992) and then later with Windows 95, 98, Windows XP, Windows Vista, and Windows 7, 8, and finally Windows 10. (2014)

I operated a SE Wisconsin Tri-County for profit business as President/CEO, involved in the manufacture, sale, integration, and support of many hundreds of custom-built business client and server computer systems. This includes the integration and support of hundreds of OEM laptop and tablet computers, printers, networking gear as well as client and server software products. I linked multiple customer remote offices to centralized databases via VPN's across Internet connections.

I was also a Microsoft Partner, Microsoft Original Equipment Manufacturer or OEM System Builder, and a Microsoft Registered Refurbisher, or MAR.

I also built integrated and supported dozens of specially adapted voice and modified head and hand control computer systems for the disabled as a sideline business.

I was also the founding director of a statewide non-profit volunteer agency dedicated to helping provide children with computer and Internet technology access. Our volunteer operated organization refurbished and delivered many, many, thousands of these computer systems to schools of all types, non-profit organizations, and low-income families. I founded and managed these businesses for more than two decades.

I retired from active work to write and publish novels in 2014, but remain active in monitoring and writing about current technology trends, challenging myself with new learning and self-directed pursuits, and personally deploying computer technologies in my personal ten-computer network.

Synopsis

Tired of experiencing poor Internet speeds, bandwidth error messages, buffering, and freezing along with excessive monopoly pricing, Lefty takes on an Internet monopolist and demands irrefutable proof of the delivery of their advertised service levels.

He fights for the little guys around this state and country, historically being duped with overpricing and under delivery. Well, at the very least he fights for those hundreds on his same cable node.

"Internet providers or ISP's and us are the same in that we both buy Internet Mbps from someone else. The difference is that they pay for only what they use which is logged, and billed accordingly. We pay what we are billed and for what they promise to deliver."

This is a tale of unwarranted optimism, unrelenting persistence, computer geek humor, corporate incompetence, and unregulated monopolistic behaviors in a David's fight for his fair share of Megabits from a Cable Internet Goliath.

This is also the sixth book in this series, which collectively encompass a 60-year modern day Bildungsroman for the Lefty character and the second half of his life lived largely mediated by computer screens.

Like the previous books, it is a strong work, full of both literary and formatting innovations, and some necessary computer geek humor.

This book seeks to document the Internet connectivity struggles of an average citizen author, with an above average technical background, just trying to work online and write some novels.

This "Spectrum Rhymes with Rectum" title is in effect a sequel to the writers' previous four books and follows the main character, Lefty, (who considers himself a Wilbury) in a fight against a monopolistic corporation for his fair share of Megabits from a Cable Internet Goliath.

The Insider Trilogy plus three is as follows:

- *Book One*
  The Insider (A Life Inside the Personal Computer)
- *Book Two*
  The Cozening (A Murder of Promise)
- *Book Three*
  The Insider Goes Deep (Tales from the Dark Web)
  And its companion book:
- *Book Four*
  A User Guide to the Dark Web (The 42nd and Final Encyclopedia Cyberspacia)
- *Book Five*
  The Insider Goes Deep into Spectrum
  (The Fight for Megabits)
- *Book Six (in the works)*
  The Insider Goes to Space
  (Tales from Beyond Planet Earth)

Note: All books are available on leanpub.com
https://leanpub.com/bookstore?type=all&search=Lefty Insider

A Note to Readers:

Throughout this book and the previous prequels, this writer chooses to write the term Internet with its original and intended initial capitalization spelling as a proper noun. This is also true for any outside imported text. The Internet is a person, place, or thing and as we were all taught in grade school, requires proper capitalization. The trend in current print and online spelling as *lower case, which* is disrespectful to its founders and creators in my view.

It is this writer's view that this intentional diminishment, via the lower case spelling, of this technological wonder and gift to humanity, is part of an effort by Corporate America to assimilate it into their Corporate Borg. To the founders, decentralization was the main idea, not the current walled gardens of Google (Alphabet), Apple, Amazon, Microsoft, and Facebook (META). While original pioneers like Vint Cerf may have been assimilated into the corporate Borg, people like Jon Postel and Tim Berners-Lee never were. Anyway, this writer gets to decide such things.

Non-original text formatting conventions

Text coming from "websites" will be formatted thus.

Text coming from "Wikipedia" will be formatted thus.

Text coming from "News" sources will be formatted thus.

There are no Endnotes and Footnotes are shown at the bottom of pages.

Note: this book is best read with a pdf reader and not a web browser, in Read Mode, and in portrait orientation, which allows for both page turning and to zoom in on the graphics contained within. A 1600x900 or higher screen resolution on a 24 inch portrait monitor is recommended.

Note: any typos in correspondence or textual material not originated by Lefty remain uncorrected for accuracy.

This book and the entire collection represent this writer's lifetime opus in the form of an extended modern day bildungsroman representing more than ten years of writing work and fifty years of research and life experience. As with my previous books in this series, this one is part invented fiction, part historical fiction, part textbook, and part actual journalism.

These books are what Americans may call *edgy* or *anti-establishment* and contain what my Germans ancestors might call *Sturm und Drang*.[1]

> *In literature: a bildungsroman is a novel about the moral and psychological growth of the main character. Bildungsroman is the combination of two German words: Bildung, meaning "education," and Roman, meaning "novel." A bildungsroman is a novel that deals with the formative years of the main character, and with the character's psychological development and moral, (and in this case technological), education. The bildungsroman usually ends on a positive note, (perhaps this book is an exception to this) with the hero's foolish mistakes and painful disappointments over, and a life of usefulness ahead.*
>
> https://www.merriam-webster.com/dictionary/bildungsroman?src=search-dict-box

A hyperlinked TOC has been created, but not an index as pdf files are easily searchable.

[1] *A late 18th century German literary movement characterized by works containing rousing action and high emotionalism that often deal with the individual's revolt against society*

Dedication

"Know that every border you cross, every purchase you make, every call you dial, every cell phone tower you pass, friend you keep, article you write, website you visit, email subject line you type, and data packet your router sends, is in the hands of a system whose reach is unlimited but whose safeguards are not."

NSA whistleblower Edward Snowden's encrypted email to filmmaker Laura Poitras.

This book is dedicated to Edward Snowden who has inspired my writing, my actions, and my thinking.

"Arguing that you don't care about the right to privacy because you have nothing to hide is no different than saying you don't care about free speech because you have nothing to say." Ed Snowden

"Ed Snowden's 2013 warnings and evidence effectively caused the Internet to become encrypted end to end. This would not have happened this fast if not for him" Lefty Insider

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Foreword

I want to beg your indulgence and use this rather lengthy short story to reflect on the importance computers and the Internet on my own and others' lives and of bringing high speed Internet connectivity to rural Wisconsin in specific, and to rural America in general.

The small town of my birth (population 500) seems a fitting example of how economic and social development follows economic investment. The eastern part of this town that connected with the lake was called Hika and the shipping dock was in Hika Bay. From the early days of settlement in the early nineteenth century, the lake provided opportunity for commerce via water transportation of goods and much later for recreational activities. So this is naturally where the commerce related businesses, mills, blacksmith shops, school, church, cemetery, hotel, and taverns were built. Much later, it also contained a tourist attraction in the form of a famous supper club and motel, which reportedly drew wealthy customers, mobsters, and tourists from as far always Milwaukee and Chicago.

In the later nineteenth century, the railroad came through parallel to the lake but up on higher ground a mile or so further west. This part of the town was appropriately called Centerville. These transportation rails provided opportunity for commerce and personal and business travel. Because of the value of rail transport over water transport, this part of town grew much faster than Hika to eventually have two lumber yards, a cabinet shop, two baseball fields, an additional school, an additional church, an additional cemetery, a railroad depot for passenger travel, sidings for loading and unloading freight cars, a bank, a post office, a telephone company, a chicken hatchery, dairy/cheese factory, a mink and turkey farm, numerous dairy farms, an orchard, a canning factory, a grain elevator, a farmers co-op, a farm implement dealer, a Ford car garage, several taverns, a number of small home-based businesses, (typewriter repair, small engine repair, blade sharpening, etc.) a fuel oil distributor, a volunteer fire department, (nicknamed the basement savers) an outdoor ice skating rink, a butcher shop/meat market, a grocery store, a hardware store, a feed store, a funeral home, and a small bowling alley. In addition, there was an electrical and plumbing contractor shop, and dairy equipment dealer where my father worked. My maternal Grandfather owned and ran the Matthias Dairy there with his three sons for more than thirty years, bottling milk, and making cheese. But I digress.

In the mid nineteenth century, a state highway was put in a mile or so further west of the railroad line on even higher ground, connecting Milwaukee to northern Wisconsin, which fed the transport of goods and services as well as the tourism industry. This new area was known as St. Wendel based on name of the church and elementary school there, which was once considered a remote outpost of the original lake front Hika church. The St. Wendel area grew to include an auto junkyard, a supper club, and bar with dance hall including an indoor roller-skating rink where I skated to Beatles music as a teenager, and concert hall where Jay and the Americans once played. I attended St. Wendel School, was an unmotivated and unimpressive student, Altar Boy and Boy Scout but also an All Star Little League pitcher who pitched our little C-of-C team to a Championship game, by throwing 38 strikeouts, across 21 innings in three consecutive tournament games. But I digress yet again.

Eventually these three areas were merged and named Cleveland, now quite appropriately housed within the township of Centerville.

In the later part of the twentieth century, an Interstate highway was put in even further west of the state highway, rather than on the existing roadbed, chewing up many acres of irreplaceable and valuable farmland. This highway facilitated travel from Milwaukee all the way north to Menominee to serve commercial and tourism needs. This time the highway mostly bypassed St. Wendel and provided only for exit but facilitated the additional establishment of a technical college, a now closed restaurant, a gas station and convenience store, a few apartment buildings and subdivisions, as well as a VA clinic.

The lake, rail, highway, electrical, water, street and road, civic and educational infrastructure enabled all of this development to happen over the course of a couple hundred years. Public investments made for the public good, democratic socialism actually, made this economic and social growth happen.

As I write this in the second decade of the twenty-first century, most everything that previously employed people in the village of my birth is long gone. It is a shell of its former self. Successive governments has not made the necessary economic investments in the past five decades, with the exception of the NSF funding that ended up creating the Internet. Over the past thirty-five years however the Internet has developed into a vehicle that we can use to plot a path forward to better days.

Citizens are not blameless victims in this however. They have chosen to save a nickel by buying cheap Chinese and foreign goods built from near slave labor rather than supporting their local businesses. Meanwhile the Superstores and union busting warehouses of the world have eliminated two jobs for every one they create. The young people moved away for jobs or school, businesses closed as they could not find employees, tax revenue dropped so infrastructure investments were not made. No housing, no decent Internet connectivity, no entertainment, no future. No local employment for the graduates of the local technical school.

Now however we are in a position to make the necessary investments for the future. All we need to do is run the fiber optic Internet cable to ensure our future. The right a ways are already there. They have already been built. The highways, the power and telephone poles, the storm sewer pipes already exist as conduits for these cables. History has proven that if you build it (infrastructure) they will come. They will not only come, they will build, they will innovate, and we will all be better for it.

1980's dial-up telephone Internet connections did not allow for video conferencing, online education, interactive web sites, and telehealth doctor visits. Imagine if the technology would have stopped there because of a poor vision of the future needs of a society? In the early 2000's ISDN and DSL telephone Internet connections were faster but did not allow for many of the previously mentioned services including streaming movies, online game playing. Imagine if the technology would have stopped there because of a poor vision of the future needs of a society? Now two decades in to this millennium, we have allowed a cobbled together monopoly run converted cable TV system delivering Internet to the urban or semi-urban fortunate few and DSL delivered over vintage WWII era tapped-out corroded high resistance copper phone lines to the rural many. Many more however rural citizens are left to see what they can do with 4G or 5G wireless cellphone service with punitive data caps.

If you look at development nationally or even internationally, you will see that development follows Internet infrastructure. (In South Korea, a 1Gbps Internet connection is $30 per month) The US has fallen to 11th in the world in Internet availability and connectivity, with an average of about 200Mbps. In Wisconsin the average less than half of that, and remember this is the country that invested tax monies to develop the Internet in the first place. So why does rural Wisconsin's Internet infrastructure resemble that of a third world country?

The median download speeds across Wisconsin are considerably below the current minimal acceptable level of 100/25 Mbps, and should be closer to ten times that, or 1Gbps. And yet, the higher Internet speeds advertised by the monopoly broadband provider incumbents are just an illusion. They are repeatedly caught lying about speed, coverage and pricing and are punished with small inconsequential fines. Annually, the Internet provider companies file Federal broadband reports lying about coverage areas and speed delivered which no one in or out of government believe.

From this writers own personal experience, I know that advertised Internet speeds represent a massive fraud being perpetrated on the American public, who mostly do not know when asked what speed they are paying for, or even to whom they are paying it. The FCC, FTC, CPA, and Wisconsin DATCP (consumer protection) are aware of this but have become feckless agencies, beholden to the lobbyists and are thus not interested in resolving it.

Our current national telecommunication system, much like our national healthcare system, does not serve anyone well, completely fails many, while having the highest cost and poorest outcomes in the developed world.

As with most problems we face the root cause is greed and corruption, which eventually may very well be the primary cause of the end of us as a democracy, a nation, and as a civilization. Laws are the operating system of a democracy, and the failure of our legal system will likely cause it to crash. A Real Life BSOD.

Oh, did I just get a bit dark here? Perhaps it is because:

- We have been in a pandemic and the aftermath for years now, extended by our own actions or lack of them
- Self-inflicted climate change is destroying much of our natural resources and what infrastructure our civilization has built
- Graft, corruption, and greed are now endemic in our government and business institutions. We don't have much inflation, we do have excessive Greedflation.
- Decades of underfunding public education has come home to roost to where a majority of our citizens will believe anything from anyone that comes from Facebook or Twitter. Horse medicine or bleach for virus prevention anyone?
- A third of our citizens show strong evidence of mental illness with delusional thinking and denial of the reality in front of them.
- The surveillance state, the parasitic and predatory corporate app cesspool, the mobile phone-clouds-hit-storm most live in now.

Ok, back again, where was I?

In my lifetime the Internet (ARPANET/NSFNET) has evolved from a research and communication tool for university researchers and government defense purposes, (who initially funded the creation and expansion of this network via ARPA and the NSF), and then from a curiosity to an essential tool of commerce, entertainment, and communication for the general population. Now it has further evolved to an essential and necessary 21st Century utility.

We need high speed broadband Internet not only to spur economic and social development, but to put an end our increasingly jobless economy and social and economic decline. We may very well need the 1Gb symmetric Internet connections from fiber optic cables to deliver mental telehealth services to as much as one third of our national population, now lost in the delusions of alternate realities, alternative facts, alternate electors, and cellphone enabled mass hallucinations. Delusion is a mental illness.

We will also need to provide PTSD telehealth therapy to the millions of exceptional health care workers needlessly put through endless emotional trauma by these noncompliant selfish and sociopathic people who were cured or died on their watch.

According to the recent US population census, populations are moving south and west, with the largest populations in the coastal areas. I believe however, that climate change will reverse these trends in the decades to come. Accordingly, rural America will be where economic growth will be expanding and the necessary infrastructure to support this including fast Internet connections, will be needed.

There is again, as in our historic past, a role for government here. The corporate mantra of maximizing shareholder value, will not accomplish this when there is tradeoff between long-term investments and short-term stock market profits being weighed against each other.

- Slow internet speed results in productivity loss. A good broadband connection can offer cost savings through increased productivity and reduced stress levels.
- Faster Internet allows more users due to more bandwidth that which allows more users and devices to access the internet without any interruptions. Many of the latest business tools available require fast Internet to access applications and data that are cloud-(remote server) based.
- Insufficient bandwidth negatively impacts your employee's ability to connect, coordinate, and communicate with your co-workers and business counterparts.

https://aws.asianetbroadband.in/business-benefits-of-high-speed-internet-connection/

My own personal and business Internet usage has evolved over the past two decades, in part due to new content availability, but mostly due to the availability of the necessary bandwidth. From 100 Mbps RR cable, down to 1Mbps DSL and then up to 5Mbps Wireless Broadband, and finally back up to 300/500/1000 cable.

The overall theme here is that more bandwidth bring more opportunities. Opportunities for video meetings, entertainment, employment, entrepreneurship, education, etc.

Bandwidth drives personal and business development opportunities. Chickens lay eggs.

Technology is driving business growth in every sector of our economy across this nation. This also means new businesses and new jobs. For businesses is in this technology space, such as IT, website development, computer repair, tech consultant, high speed Internet is a necessity. Not only will customers expect fast service, but your business will rely on increased processing speeds. Administrative Assistants, Customer Service Representatives, and Writers will benefit from these changes. In our increasingly technological world, continuing education via online colleges will become the new normal.

Due to the pandemic, which has not become endemic, more people are working from home and even more wish to. I believe that this situation will span a number of future generations. This desire to not work in a centralized office is due in part to the state of childcare, the cost of fuel and clothing, and the poor state of transportation systems in this nation. This situation is aggravated by the lack of competence and innovation in the area of virtual schooling.

The fastest growing business segment in this country is small businesses, such as buying products in bulk and selling them online, selling homemade products, starting a drop shipping store, starting a print-on-demand business, offering online services, teaching online classes, productizing your service or expertise, growing an audience you can monetize, buying an existing ecommerce business, starting a subscription box business, getting involved with pets, selling unwanted items, or playing lay video games. Companies will actually pay you to do this. https://www.shopify.com/blog/home-business

But now back to the business at hand: Here is what the Federal government thinks as it dispenses hundreds of millions of tax dollars to existing incumbent monopoly Internet providers to encourage them to subsidize and deliver Internet access for millions of underserved people: (it should be known that this has not worked for the past 30 years to the tune of 400 billion dollars)"We are in the middle of a pandemic. So much of modern life has migrated online. As a result, it has become painfully clear there are too many people in the United States who lack access to broadband. In fact, if this crisis has revealed anything, it is the hard truth that the digital divide is very real and very big "https://docs.fcc.gov/public/attachments/FCC-21-18A3.pdf

Here is what AT&T thinks:

"There would be significant additional cost to deploy fiber to virtually every home and small business in the country, when at present there is no compelling evidence that those expenditures are justified over the service quality of a 50/10 or 100/20Mbps product," AT&T wrote. (That would be 50Mbps download speeds with 10Mbpsupload speeds or 100Mbps downloads with 20Mbps uploads.) AT&T said that "overbuilding" areas that already have acceptable speeds "would needlessly devalue private investment and waste broadband-directed dollars. "

AT&T lobbying against proposals to subsidize fiber-to-the-home deployment across the U.S.

Here is how I think about this:

The above mentioned "overbuilding" is what the monopoly broadband industry calls one ISP building in an area already served by another ISP, whereas Internet users desperate for cheaper, faster, and more reliable service. I call that "broadband competition." In the end, corporate monopolies do not like local economic development. It cuts into their profit margins. But in reality economic development, betters the lives for people (housing, jobs, education), and follows infrastructure investments. Chickens lay eggs. It is actually as simple as that.

The incumbent monopoly Internet providers lie about speed and coverage areas, the use tax subsidies designed to discount Internet service, but only after first raising their prices. They use taxpayer monies to inflate executive compensation, do stock buy backs, and pay dividends to shareholders.

The corporations and the wealthy have decided that they no longer have an obligation or any generational responsibility to fund these investments by paying appropriate taxes. They use the publically funded infrastructure that surrounds and protects them, without feeling an obligation to fund it. Their mantra is to "privatize the profits and socialize the losses". They believe that their ill-gotten gains should be paid in dividends to those will money to make more money from this money, without adding anything to the larger society. The government has decided to no longer serve its legal role of the "cop on the beat" to enforce tax laws and regulate the prevailing unbridled corporate greed. It feeds corporate interests to have people travel distances to work at jobs that pay less than a living wage, and keep people in check and controlled by having them living paycheck to paycheck.

Introduction

Some background might be helpful in fully understanding the following fictitious three year fight against Spectrum documented in the upcoming 500 pages and 140k words.

I am a former Altar Boy disgusted and enraged by the Catholic Church's institutionalized pedophilia.

I am a disenchanted and disgusted veteran of the Army UN **Peace** Keeping force in S. Korea. A tricky _*Dick*_ Nixon Vietnam-era draftee, who saw 55,000 of his generation sacrificed for nothing.

I am a disappointed and discouraged veteran of the US Peace Corps in West Africa, where colonialization and racism continue to be actively practiced to this day.

I am a discontented college graduate who had some unnecessary difficulty due to a substandard elementary parochial school, and public school secondary education.

I am a disgruntled and disillusioned former secondary and post-secondary public and private school teacher/professor, whose red pen edits were too hard on the sensibilities of adult students but yet appreciated by the young ones as acknowledgement of me having actually read it.

I am an angry and frustrated survivor as an urban public school board member, who has seen the excesses of pubic unions and the limitations of self-governing systems.

I am a disconcerted yet wiser and no longer naive former cog in a corporate machine, that lies and cheats as standard business practice.

I am a unsatisfied veteran of an private school online Master's degree program of the early 2000's where the costs were high and the methodology and end product was marginal.

I am a frustrated veteran of online dating sites of the early 2000's, where liars, cheaters, and fembots abounded.

I am a battle-hardened veteran of 20 year effort to create and run a non-profit organization despite overwhelming bigoted forces against and widespread indifference to it.

I am a fortunate business entrepreneur who was lucky, curious, and motivated enough to become part of the coming of age of the PC and Internet revolutions. But also unfortunate enough to be living through the transition from a PC driven world to a mobile and cloud environment where application program software has been *enshitified* to the lowest common denominator and has resulted in the functional degradation of web base "apps".

I am a pissed off senior curmudgeon who is tired of being taken advantage by corporations and contractors. (driveway sealing pricing estimated ranging from $400 to $950) Got it done by talking one down from $750 to $550 by questioning his measurements, wrong by a factor of 2, and offering Benjamin's as payment at time of service.

My first computer business joined and was paid off to the tune of hundreds of dollars, in a class action lawsuit against the major CRT monitor manufacturers for illegal price fixing.

My second computer business joined and was paid off to the tune of tens of thousands of dollars in a class action lawsuit against major memory chip manufacturers for illegal price fixing.

I just joined a $2 million dollar class action lawsuit against a local hospital who put a Facebook tracking Pixel on their patient charting page to allow personal patient info to be scrapped by Meta. The claim alleges the defendants use of the Meta Pixel on its MyChart portal between February 1, 2017 and January 22, 2020, and on its public websites between February 1, 2017 to May 23, 2022.

My eyes have been opened for 50 years to the dirty world around me and I really just don't like it, and need to write (vent) about it to retain my sanity.

See my website if you want to read more realistic (red pill) doom and gloom, or as my ancestors would say *Sturm und Drang*.

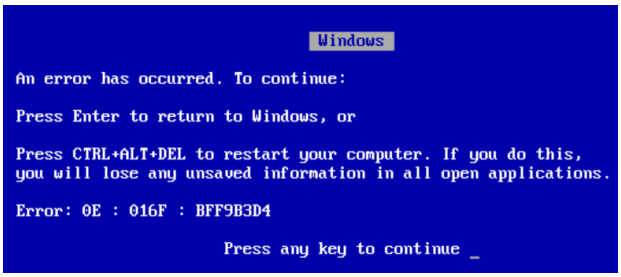
Especially this recent one https://www.tcw.org/lefty/Short_Stories/The_Statue_of_Liberty_is_sailing_out_to_sea.pdf

Prologue

A MICROSOFT WINDOWS SHORT STORY

Back in the 80's I purchased a mail order personal computer shipped from Texas. I hooked it all up and fired it up and it did not do anything.
I called a buddy for help, explained my problem, and he asked if I had installed MS DOS on it.
I asked him what's DOS. He said that it is a *thing* that you need to install to make it work.
So I installed the *thing* (DOS 3.3) on it and it then worked fine and subsequently upgraded to DOS 4, (Bad) 5, (OK), and 6 (Very Good).

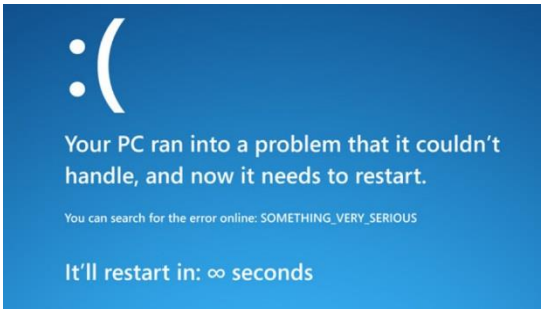
I used that upgraded thing until 1990 and then MS gave me another *thing* (Windows 3.0) to put on top of my DOS *thing*, with all the crashes and problems that caused. A *thing on a thing*.



It was a *thing on a thing*, I was using through mostly OK Windows versions 3.1, 3.11, 95, 98, and ME.
I continued to use that *thing on a thing* until 2001 Windows XP (Very Good) when MS gave me just a single *thing* again, continuing with Vista (Good), and Win7 (Great). It was _all good_ for a decade or so.

In 2012, Microsoft decided to put a *thing on a thing* again with a horrible Win8 kludge, followed by a slightly better *thing on a thing* in Win10 and then Win11, which carries with it the same significant usability degradation.

But we are now again back to a *thing on a thing*, with all the problems that go with that.



The End for now…Courier, Helvetica, Arial, Calibri, and next Segoe UI Variable?

Part One, Dear Spectrum (2021)

Lefty soon discovered that the CPU, memory and network bandwidth overhead caused by the Virtual machine, the VPN and the Tor browser slowed his 100 Mbps Internet speed to an unacceptable level for productive work like Dark Web research and writing a novel.

So he had a couple of options at this point. Elon Musk had just sent him an email to sign up to be a beta tester for his new Starlink Internet service which promised 300Mbps and a low latency or, or he could upgrade his existing 100Mbps Spectrum service to their newly offered 300Mbps service, later bumped to 400Mbps. Both were about the same monthly cost, but he would have to wait an undetermined amount time for Starlink to get enough satellites up to cover his area, and for them to build enough equipment to ship. They already had a half million pre-orders so this might be a problem he thought. (Not to mention the fact that Musk seemed a bit flakey) The first shipments of the dish system, nicknamed Dishy McFlatface, would be to the northern latitudes (°N) 42.5 - 46.6. Lefty aka n0stis on the DW, would be in that range.

Also, those who had already received it noticed a problem in northern climates. While the dish was heated (unlike DIRECTV) to prevent problems from the buildup of ice and snow, it also attracted some neighborhood *friends* if you did not tower or roof mount it. Of course, this was harder to do in the winter months and people tended to temporarily set the dish on the ground.

A computer chip shortage and supply chain issues did not improve his odds of getting a system either.

So the following pages will represent his experience and communications with Spectrum.

Lefty knew going into this expected ordeal that the Spectrum name represented the merger of two companies, Charter and Time Warner, both of which had the lowest “F” customer service ratings possible.

But since the current environment allows for and facilitates Internet provider monopolies with precious little or no consumer choice, he was pretty much stuck with this situation.

So his first step was to go online and signup for the upgrade. Not surprisingly, this is where the wheels started to come off, and spurred my first email[2] after an unsuccessful communication with their phone technical support. So buckle up, because here we go off on the start of a long sad adventure, which lasted several months. As it turned out, Lefty was in fact their worst nightmare, a retired guy with some knowledge, and a lot of time on his hands.

[2] I discovered a list of names of all of their C-suite executives and Board of Directors online and then figured out their email naming conventions so I could share my rage both frequently as well as widely.

Dear Spectrum,

PRINT THIS EMAIL OUT, TAKE IT HOME, RELAX, CRACK A BEER, AND READ MY SAD BUT TRUE ALMOST 5000 WORD STORY. OR DOES THAT MAKE IT A SAGA?

I recently upgraded to your 300Mbps Internet service after having your mostly adequate 100Mbps service for some years here. My wife and I are both retired now, and held captive in our home by the pandemic and the caravans of fools who refuse to listen to science, not wear masks, create new variants, will not take the vaccine, and may drag this virus situation out for generations, or at least for our lifetimes. My wife and I really do not like people coming into our home as we both have preexisting conditions, which make us susceptible to the virus. Although we have had the vaccine, we would rather be served by one smart technician, than three not so smart ones, who in the end accomplish nothing.

Anyway, I did not perceive a speed upgrade, I did this upgrade *online* and received no notification of when it would become active, so I called your tech support and they told me that the new speed had in fact been turned on the previous week. I explained that I was not able to discern any difference, despite the speed tests, I had done, and after arguing with them for a while, they dispatched a technician, who I will call Technician One, a few days later.

He tested cable signal strength and bandwidth with his meter and cellphone and pronounced it OK. I told him that I am only getting 150-200Mbps from my Ethernet port on my router. He said that my router was *_stuck_* and that I should replace it.

I explained that based on my thirty years' experience starting with 2400bps dialup modems, having been an ISP, having had ISDN, DSL, TWC Internet cable in two cities, and point-to-point wireless broadb**a**nd in two other cities that *_stuck_* was *_not_ a thing* for a router. I explained to him that this is science not magic, it is Ethernet which is a networking standard developed by Bob Metcalf et al, many years ago as a grad student at MIT and engineer at the famous Xerox Palo Alto Research Center (PARC).

I persisted, also showing him that I could only get 100 Mbps on wireless with a new Win10 MS Surface Pro tablet 802.11ac connected at 5.2 GHz, so he replaced the modem with an identical modem, did not retest, and accomplished nothing. He said that there was nothing else he could do and left. Well intentioned, yet ill equipped it seemed to me. We certainly do not want Technician One back in our home after learning of his recent ill-advised vacation in Mexico during this pandemic.

I currently have four computers, three laptops, two tablets and a smart phone. They are a mix of Win7, Win10, and Android. A mix of wireless "n", "ac" and "ax" all connecting at 5.2 GHz. They all have gigabit Ethernet connections except for the phone.

I then called support again the next day to complain and argue, so they dispatched Technician Two the next week. This one was a so-called commercial installer who claims to know everything about everything. Just ask him.

He said that he had spoken with Technician One and again came at me with the *_stuck_* router thing. This must have been a concept introduced in a training session at the office, because it was assimilated wholeheartedly by this group. I told him to envision corrupted flash memory, or a bad EPROM chip as a potential problem but since there was no grease zerk on my router, I had no way to unstick it.

I questioned his testing meter, asked him to use a laptop, any laptop. He said that the company laptop he had in the van would not see 300Mbps at the modem either. I asked him to explain that and he said that he did not know why and that there was nothing he could do about that. He said he could not do anything until I replaced my $300 five-year-old R7000 NETGEAR Nighthawk router. He said just to buy a cheap router and that I did not need an equal or better router than I had, and said the coverage would be the same to the extended

areas of my home like my deck and garage. It was as if his lie about the problem, if made cheaper to solve, would make me swallow it easier. I knew this to be false, because my router covered 2000 sq. ft. and the cheap ones maybe 1200-1500 sq. ft. So after speaking with NETGEAR tech support, I procured a discount and ordered this upgrade to a $350 XR1000 NETGEAR Wi-Fi 6 router covering 2500 sq. ft. so I could reach my garage and deck.

After a few days I texted him that of course the new router did not fix anything and that I had tested two additional computers of mine and got the same bad results from the modem Ethernet port. After a series of contentious text messages that I retain but will not repeat except to say that your corporate office would not be proud of this employees conduct in person or via text. It ended with him saying that there is nothing he could do for me and me saying that he should not confuse _*can't*_ with _*won't*_. Technician Two lied to me so blatantly and repeatedly to the point that I had to replace the worn out batteries in my Bullshit Detector after he left.

I complained again on yet another tech support phone call and a guy after arguing with me for a while about my insistence that my experience tells me that this is a provisioning problem, refused to connect me by phone to a network engineer. I asked him what Internet service he had and he said Spectrum 400Mbps and that he was getting 400Mbps at the router and 300Mbps on his wireless devices. I told him that I also wanted that, so he said he would dispatch a field supervisor to my home. (Multiple of your tech support people told me that this could not be a provisioning problem because the Upload speed increased from the old 10Mbps to the new 20Mbps speed.) I did then and do now believe that this is nonsense, a result of poor training and aggravated by a lack of technical and intellectual curiosity by your employees.

A phone message then informed me that I would get a service call the next week between 5-6 pm. Expecting a field supervisor, I was surprised to see Technician Three the guy who had originally installed my line many years ago. He went about solving the issue in a workman like manner, testing, and replacing the connectors and ground block in the basement and connectors at the outside pedestal box. Again, with his tester he pronounced everything OK. By running continuous randomly bad speed tests, I eventually convinced Technician Three to call a field supervisor. It was then that Field Supervisor One asked if this was an upgrade when I answered Yes, I learned that Technician Three was surprised by this. He had not been dispatched with this info and did not figure out himself that he originally installed 100Mbps here and now was looking for a 400Mbps connection. Anyway, Field Supervisor One quickly offered that this was a provisioning problem, as if it had happened before.

So they re-provisioned my modem and we gained a bit of speed. Prior to this, on speaker phone, I quizzed Field Supervisor One about the bad "N" Hitron modems with the Intel Puma chipset I had read about and how the Technicolor with the Broadcom chipset doesn't have these problems like DDoS, cable haunt, security problems that caused slow speeds, dropouts, and packet loss. He claimed to be unfamiliar with any of this information. I would already have this modem elsewhere in the country where 400Mbps is being offered, except for this technology backwater where I live.

After the re-provisioning did not completely work and me still holding the technician hostage. I asked him to use a laptop for testing and he said that installers such as himself were not provided with company laptops. Perhaps all your installers should be equipped with an uncrippled laptop to use for _*real world*_ testing.

I kept Technician Three here at my house about 2.5 hours and he was not particularly happy about that but he did try hard unlike Technician One or Technician Two. (Your phone message after all says that the service call could take between one and three hours so I was

within that time line.) He also was again well intentioned but ill equipped.

After me getting him to test my wireless connection on his phone, and he got 80Mbps, Technician Three and Field Supervisor One decided that they would try to find me a Technicolor modem.

Meanwhile, beginning the next day I continued with more testing and troubleshooting connected to the Ethernet port of my router.

I then got this once and have not been able to repeat it:

So this then disproves that there is anything wrong with my equipment.

A little later in the day, I got this:

If you run this same test three times in a row and average them out, I will be around 250Mbps.

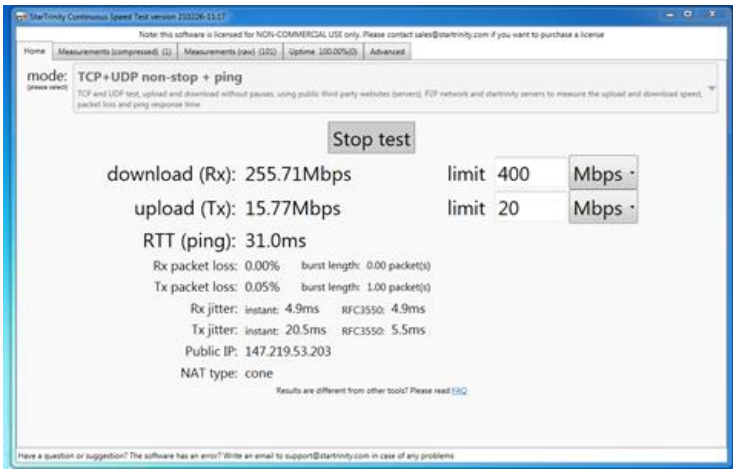
So this pretty much proves out the random nature of the 10-second tests on the speed test websites.

Compare speedtest.net, Spectrum speed test, Affinity speed test, dslreports, and fast.com sometime to see this for yourself. The test results are all over the place.

Test Site	Speed
ATT	140
Cox	158
Fast	190
Speedtest	369
Speakeasy	212
Spectrum	332
Speedcheck	128
Xfinity	156

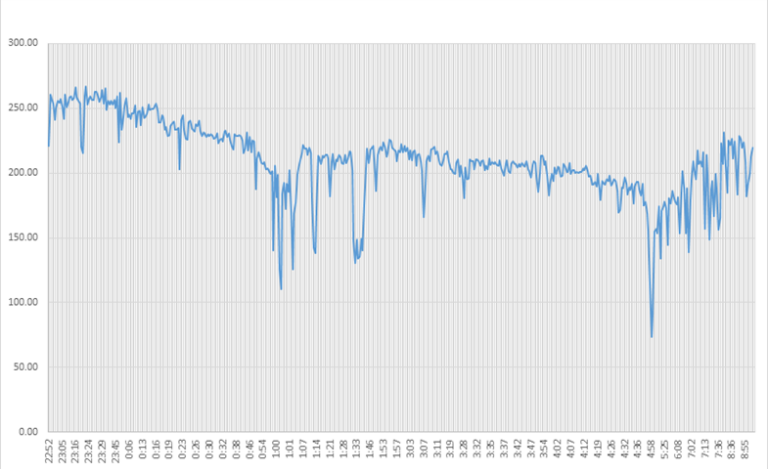
Speed tests in Mbps 8:30 am Monday

So I installed a professional continuous testing software package, CST, and did a 30-minute test, and got this:

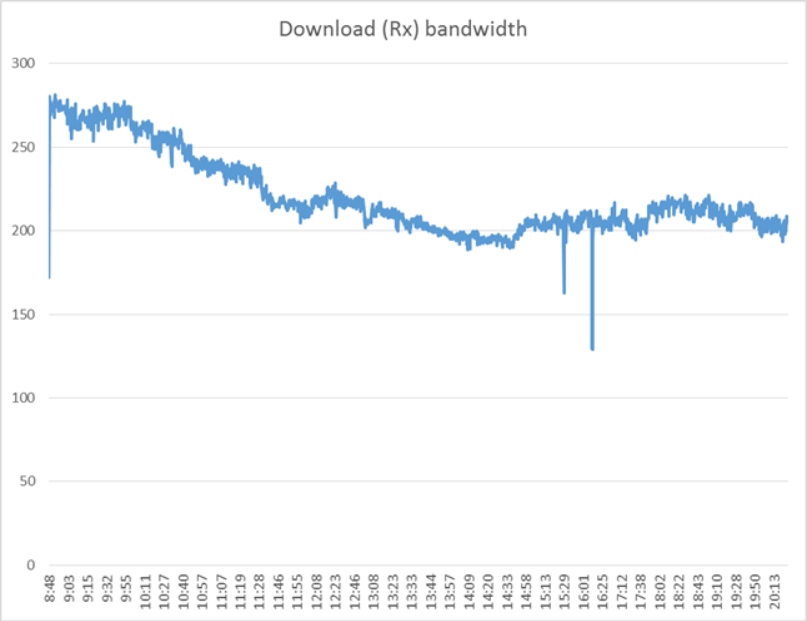


So this test points at your provisioning/equipment/network as the problem(s).

If you still have doubts, I exported the test data to Excel, and have a look at this ten-hour evening snapshot that looks like a bad EKG or perhaps a lie detector graph.



Did some daytime testing and got this: (supporting data for these charts are available)



Called your Tech Support yesterday as I got impatient not having heard anything since last Thursday when they promised me a new modem, very soon now. Ended up speaking with one of your Customer Service Leads. He looked at the case notes, which inconveniently do not hold any reports from the three techs that have been here. He ordered a service call with a supervisor for this week.

Today shorting after receiving a recorded message from you about this visit, I get a call from a supervisor I will call him Field Supervisor Two who says he is in the area and wants to stop in. His demeanor on the phone was immediately adversarial, not inquisitive or concerned, and certainly not appropriate for what your company has put me through this point. In a very short phone call where I agreed to his visit, he acted angry that I would not listen to the proof provided by his staff that everything was fine, despite my clear evidence to the contrary.

Field Supervisor Two arrived with this adversarial tone immediately, which can be verified by my wife who overheard the conversation. I showed him my evidence that it was not working correctly, which he dismissed out of hand. He explained that the company never anticipated so much network traffic due to the pandemic, which is overwhelming the network. This reminded me of what Technician Three had said to me early in his visit last week that their network was at 98% of capacity. Nice! I told him I wanted to get what I was paying for and that if Spectrum could not provide it, they should stop selling it or at least stop billing for it. This would be the ethical thing to do. Half the price for half the speed would be about right, until you upgrade your network sometime in the future.

Field Supervisor Two was eventually able to find one website and one server where he could get a 400Mbps test result. But only one, and only once in a row. All other evidence points to the contrary. He persisted that the problems was in my head and not a functional problem because I was not seeing the 400 number. I had to explain number of different times that my router input speed directly affected my nine wireless devices none of which would show a speed much higher than 100Mbps individually.

I told him that he needed to stop trying to fix this problem mentally with me and become intellectually curious and customer focused enough to solve it physically.

Field Supervisor Two then switched tactics and gave me the whole "What do you expect me to do as I am just a lowly cable installer" routine, proving once again that the "Peter Principle" is alive and well at Spectrum. He mentioned that he did not understand all of this new technology as well as of his need to retire a number of times. I told him that he could escalate this up to the next level, as Customer Service had told me over the phone yesterday, and he claimed that he could not a number of times until he eventually relented and agreed that he could actually do that.

He reminded me of the Elton John song, Ground Control to Major Tom, where the lyric is *"And all this science I don't understand, it's just my job five days a week."*

I eventually got him to replace the Hitron modem with an Ubee modem, which Technician Three had promised last Thursday, and it made no immediate discernable difference. And I eventually got Field Supervisor Two to connect his company laptop to the modem under his terms that if he got something near 400Mbps he would leave my home and consider it mission accomplished. He did that and much to his confusion, he was unable to achieve half of that number. He continued to blame my equipment however, even though this had been proven wrong with three previous techs. He said that he did not want to talk about history. He also said that Spectrum never anticipated all of these people being home using their Internet connections during a pandemic. Again hinting towards network overload.

I gave him printouts of my test results to share with his counterparts in the office, and he agreed to have conversations there and perhaps escalate this case if required. The whole idea of Spectrum sending Supervisor Two here to fix this actual problem mentally rather than physically, with an aggressive *in your face* attempted intimidation style followed by the fallback position of aw-shucks I'm just a lowly cable installer persona so feel sorry for me, was an EPIC fail for Spectrum.

Maybe we can finally **work** the problem here. I spend my whole adult life around computers and my thinking remains "Spock" like meaning logical, and scientific. I do not brook bullshit theories, speculation, and beliefs like "stuck" routers.

I am anticipating the arrival of yet another field supervisor with a Technicolor modem in his pocket and a better understanding of both his job and your data network sometime tomorrow morning.

UPDATE:

So Technician Three and Field Supervisor One showed up this morning. They did some testing, some work on the coaxial line, some more testing, replaced the Ubee modem with a Technicolor at my request, did some more testing, and became puzzled at the results.

He actually used his laptop for wireless, router, and modem testing. This is real progress!

Field Supervisor One was personable and interested in finding solutions and not assigning blame. He exhausted most of his ideas and said he would return next week to continue testing around the neighborhood with a test modem. This is the first visit by Spectrum where I was **not** frustrated and upset after it occurred. My wife and I remain **outraged** at our treatment by Field Supervisor Two during yesterday's visit and Technician Two's visit previously.

Field Supervisor One was kind enough to provide me with his email address so I shared with him the data that created the charts. I also shared yet another alternate idea for testing download speed, by *actually* downloading files. It did shock me however to learn that the same guy who claimed to have looked at the overall network bandwidth utilization for the past several months and said it was OK, and also looked at the modems of my neighbors in this subdivision, but then claimed he did not know if any of the other 25 or so homes here were provisioned for 400Mbps or 1000Mbps service. This to me would be a key piece of information for serious troubleshooting, but what do I know.

At least now after five visits by five technicians, over what is approaching one month and again in the midst of a pandemic, we have finally graduated from the:

1. The initial it's the customer's computer
2. To it's the customers router
3. To it's the customers home wiring
4. To it's the wiring at the PED
5. To it's the servers on the testing websites
6. To it's the testing software the customer is using
7. To it's ***our*** network that is the problem, I guess we had better test that now.

This is progress.

To be continued…

So I am waiting to hear back from Field Supervisor One on his local network testing results:

In the meanwhile, I have discovered that a network traceroute shows 17 hops[3] (routers) for me to get to my Internet provider Spectrum.com and 13 hops to my email provider.

Today I replaced the existing Ethernet Category 5e (1Gbps) cables from my router to your modem, and from my computer to my NETGEAR RX1000 router with Ethernet Category 7 cables (100Gbps). I did this not because I am expecting or need 100Gbps bandwidth from Spectrum, (I would settle for 1Gbps symmetrical) but because of the exceptional electrical shielding on these cables that will eliminate any chance of existing electrical interference. I just want the 400Mbps you charge me for and not the 200Mbps or so you are currently giving me. I found no discernable difference in speed with these new cables.

But really? From 1200kbps to 940Mbps over 35 years? Hell, there is at least 20 years of telecoms promising fiber optic cable in there. All of you in the telecommunications industries, should be ashamed of yourselves, if that is the best you can do. As if that is what the country that invented the Internet deserves. Kids seeking an education are shut out because they live too far into the country or too deep into the cities and there is just not enough money to be made there for you despite the government corporate welfare you receive.

Professionals trying to work in this pandemic have to put up with stuttering video calls, even *live* on national TV. You should shutter every time you see this. And yes, feel ashamed. And especially for the dropped connections for the kids struggling to learn. But I digress…

I am starting to question your network architecture after this testing:

[3] A traceroute will show you how many layer 3 hops you are getting through from A to B. However, you could be going through hundreds of switches in between. You could also be going through 10 ISP routers running a layer 2 VPN that appear as a single hop. An MPLS network could hide its internals, or show its internals to you. You could have transparent firewalls in the path as well.

Set by speedtest.net as optimal (closest)			
Renaissance Learning, Inc. Wisconsin Rapids, WI	*https://www.renaissance.com/*	*153mbps*	*18 hops*
Preferred by Spectrum techs			
Nsight Green Bay, WI	*https://nsight.com/*	*231mbps*	*18 hops*
CyberLynk Network Milwaukee, WI	*https://CyberLynk.net/*	*319mbps*	*13 hops*
Ethoplex, LLC Milwaukee, WI	*https://www.ethoplex.com/*	*273mbps*	*12 hops*
•Always six hops through Charter routers *•Less hops appear to equal higher speed test bandwidth*			

So as it turns out, me getting Field Supervisor One to give me his email address was a pyrrhic victory because he is unresponsive to my emails.

This whole experience has apparently brought out my inner B.B.King blues. So I wrote you this song.

Spectrum Blues
With six or more hops to anywhere
Spectrum is getting me nowhere
I want to go to Amazon to buy underwear
But I need to take six hops just to get there
Chorus: My traceroute leaves no doubt
And it makes me want to shout
Your six hops to anywhere are bringing me down
I need nine hops to get to Google
Try to get that into your noodle
When it takes six hops to the bank to get my money
I am not thinking that gee this is sure funny
Chorus: My traceroute leaves no doubt
And it makes me want to shout
Your six hops to anywhere are bringing me down
In this pandemic where stupidity seems to be endemic
Nine hops to order groceries only feed the epidemic
Spectrum won't give the speed that they promise
So I've come to realize that they have led me amiss
Chorus: My traceroute leaves no doubt
And it makes me want to shout
Your six hops to anywhere are bringing me down
And unlike the six degrees of Kevin Bacon

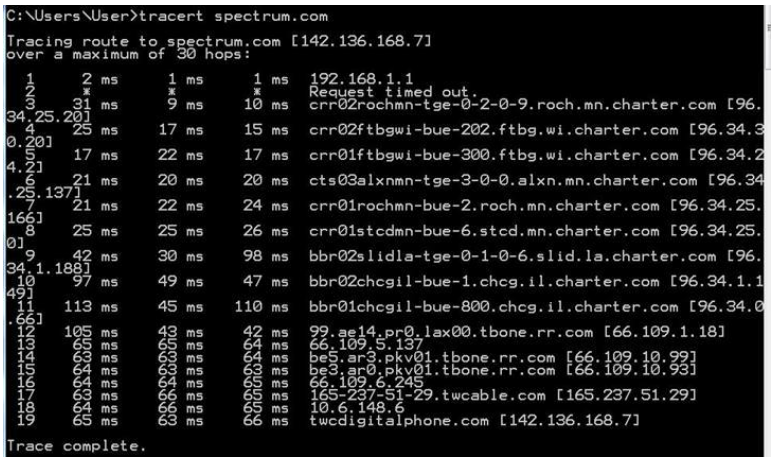
With six hops to anywhere, it's not speed that I am take' in
LiMu Emu and Doug say to pay for only what I need
But after paying Spectrum more, I can't even get their promised speed
Chorus: My traceroute leaves no doubt
And it makes me want to shout
Your six hops to anywhere are bringing me down
Five of their technicians seem clueless to you
They all say there is nothing they can do
I guess it could be said if you pay Spectrum
You are going to end up getting it in the rectum
Chorus: My traceroute leaves no doubt
And it makes me want to shout
Your six hops to anywhere are bringing me down

Got the Spectrum Blues.mp3

https://www.tcw.org/Got the Spectrum Blues.mp3

Back in the late 80's when I started connecting to the Internet you judged an ISP by how many hops to the POP, or Point of Presence. (Internet Backbone) This was especially important with dial-up connections. In the trace route I have run you can see my packets ping ponging around your network about 19 times before hitting home. I do not know if this is a result of your merger, I do not know for sure that it is part of my problems, since I am not a network engineer, but I think that you really could stand to clean up your shit here.

I can understand me hitting your local router, your Eau Claire router, (where your speed test server is) but then it should hit the Chicago or Minneapolis POP real soon after in my mind. Of course, again I am not a network engineer, just a lifelong computer geek and an unhappy customer.



```
C:\Users\User>tracert spectrum.com

Tracing route to spectrum.com [142.136.168.7]
over a maximum of 30 hops:

  1     2 ms     1 ms     1 ms  192.168.1.1
  2     *        *        *     Request timed out.
  3    31 ms     9 ms    10 ms  crr02rochmn-tge-0-2-0-9.roch.mn.charter.com [96.
34.25.201]
  4    25 ms    17 ms    15 ms  crr02ftbgwi-bue-202.ftbg.wi.charter.com [96.34.3
0.20]
  5    17 ms    22 ms    17 ms  crr01ftbgwi-bue-300.ftbg.wi.charter.com [96.34.2
4.2]
  6    21 ms    20 ms    20 ms  cts03alxnmn-tge-3-0-0.alxn.mn.charter.com [96.34
.25.137]
  7    21 ms    22 ms    24 ms  crr01rochmn-bue-2.roch.mn.charter.com [96.34.25.
166]
  8    25 ms    25 ms    26 ms  crr01stcdmn-bue-6.stcd.mn.charter.com [96.34.25.
01]
  9    42 ms    30 ms    98 ms  bbr02slidla-tge-0-1-0-6.slid.la.charter.com [96.
34.1.188]
 10    97 ms    49 ms    47 ms  bbr02chcgil-bue-1.chcg.il.charter.com [96.34.1.1
49]
 11   113 ms    45 ms   110 ms  bbr01chcgil-bue-800.chcg.il.charter.com [96.34.0
.66]
 12   105 ms    43 ms    42 ms  99.ae14.pr0.lax00.tbone.rr.com [66.109.1.18]
 13    65 ms    65 ms    64 ms  66.109.5.137
 14    63 ms    63 ms    64 ms  be5.ar3.pkv01.tbone.rr.com [66.109.10.99]
 15    64 ms    63 ms    63 ms  be3.ar0.pkv01.tbone.rr.com [66.109.10.93]
 16    64 ms    64 ms    65 ms  66.109.6.245
 17    63 ms    66 ms    65 ms  165-237-51-29.twcable.com [165.237.51.29]
 18    64 ms    65 ms    65 ms  10.6.148.6
 19    65 ms    63 ms    66 ms  twcdigitalphone.com [142.136.168.7]

Trace complete.
```

I have had no contact with or communication from Spectrum in more than a week now, leading me to believe that they have now just blown me off. So maybe it is over.

Well, after five consecutive days with me reporting my various test results, the last of which acknowledged my blues and included the lyrics above…

I got a phone call from Field Sup One. He said he had done some testing in my neighborhood earlier in the week at a few of my neighbors and had the same poor test results that I experience. I asked him again if anyone else in my subdivision could get a higher speed and he lied, I later discovered, and told me, that was a Billing thing and he did not have access to that database. He said that his meter reads fine and when I suggested that the meter might be the problem he scoffed at the idea. Instead, he is going to order yet another test modem and perhaps a different laptop to do more testing next week. He said the system tested good at the office fiber outlet, so I asked if he tested at the junction where the fiber terminated and the coax cable started in my area and he apparently lied again and said that he did not know where that node was. Really? How many months will it take to get this escalated to your engineers?

It seems to me that your plan here is to find the right combination of modems and computers to fix this mentally with me, rather than trying to fix it physically. I am now fully and completely fed up.

In A World Of "Some Setting Of Contents Will Occur During Shipment, Batteries Not Included, Objects In The Mirrors May Be Closer Than They Appear, We Have The Right To Change These Terms And Conditions Without Notification". We Now Get From Spectrum "We Only Guarantee 70% Of the Speed You Are Paying For." You Can't Even Meet That Low Bar." Last time I checked, 70% is a C minus in school.

I have discovered in going through **all of this** what the majority of your staff is **not**, and that is intellectually curious. Not just about their job duties but about related things like routers, modems, and computers. This is a missing ingredient for quality service, in my view.

One of the keys to my success in creating and running two IT related businesses over thirty years was a strong curiosity and interest about all things computer and telecommunications. The pace of change and complexity in this business over these past 30 years requires this attribute to even want to do it, much less be any good at it. This embedded interest continues today into my retirement and is also a key to many others in tech like Bill Gates and Elon Musk.

So all of this started with me taking a chance on a Spectrum upgrade to improve my speed rather than getting a Starlink satellite dish from Elon. This situation has cost me countless time and frustration as well as the cost of a new router. All of this for a retired guy on a fixed income, with too much time on his hands apparently.

I do not really know how much of this is to be blamed on ignorance/incompetence and how much on malfeasance/skullduggery but I suspect that a big portion of each is involved. Keep in mind that I would already have 200Mbps service like the rest of the country, except your monopoly requires you only do this when you have to compete with AT&T fiber.

Remember, you started this by taking my money and lying to me by blaming my equipment, and it is still not fixed a month later. This should be a cringe-worthy technical support and management horror story for anyone reading it.

PS. I just cannot wait to talk to your billing people and try to get them to not continue to charge me for what I still do not have.

I know you probably do not care, but try *to imagine* if you can, two really badly rated corporations who merge and change their name (as a disguise) but who then to the surprise of everyone seek to redeem themselves in the eyes of the general public by spurring economic development in rural areas by providing a service that boosts educational and employment opportunities for its human capital. They then choose this task as their raison d'etre and as their primary goal superseding the previous well-worn maximizing shareholder value mantra. They come to understand that you can do well, and do some good at the same time. Just Imagine it.

Dear, Dear, Spectrum, the sequel

(Or another 4000 words)

Our scene begins at Charter Communications, Inc. Headquarters[4]

Then cut to a CHARTER corporate office boardroom.

As the scene unfolds, a VP in corporate marketing is walking into a hastily called meeting where the attendees are jamming to my "Got the Spectrum Blues" song with its BB King like guitar riffs and the Chuck Berry like honky-tonk piano licks blasting over the PA system. He cuts off the speakers and then addresses his staff, as well as a small customer support contingent.

Folks, he says, "When our customers are sending us blues songs that rhyme our registered trademark name Spectrum®, to their experience with us of *getting it in the rectum*, we may have a corporate image problem. What do you all think?"

The sound in the room is nothing but crickets for an uncomfortable period until finally the new guy in customer support shyly speaks up. "*I have an idea, what if we were to upgrade our systems to be able to deliver what we promise? We could actually deliver a service commensurate to what our customers are paying for, what they expect, and want. They could eventually learn to love us. By doing this, we could actually fully embrace our Mission Statement. Let's show everyone that we are part of the good 50% of employees.*"[5]

There are another few moments of stone silence, followed by the whole room breaking out into raucous laughter. After several minutes of this, the VP finally breaks into the ruckus still laughing, "*We _could_ do that… but NAAAH!*"

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[4] *Charter Communications, Inc./Spectrum - Mission Statement to integrate the highest quality service with superior entertainment and communications products that consistently exceed the expectations of its growing customer base.* **https://mission-statement.com/spectrum-mission/**

[5] *Charter Communications, Inc.'s mission, vision, & values motivate 50% of employees. Comparably data clearly shows that a focused mission statement and cohesive core company values are vital to maintaining employee alignment.* **https://www.comparably.com/companies/charter-communications-in/mission**

Early the next Monday morning I received a phone call from a personable gal, a corporate escalation specialist she said, informing me that I would be receiving another call within 24 hours from yet another person to work on my problem. Because of my most recent email, her job she said was to direct my email to the proper person(s). She questioned me about her concern over proper COVID protocols being followed by local technicians. I explained that she had misunderstood my mention of a local technician who had vacationed in Mexico in my email. I said that it was not because he came to my house after vacation, (he came before this), but my point in my original email was that I did not what that tech back in my house for at least two weeks afterwards. Since Field Supervisors are always accompanied by a tech (per Bob over the phone with corporate) I wanted to make sure that he did not show up at my house. I asked if she had read my rather lengthy email and said that she had enjoyed my song lyrics but had not listened to the attached song. I told her she should because it was a song about unrequited love and was most certainly worth a chuckle.

Later that day, the avalanche of fecal gravity I had apparently triggered by my email to Charter corporate (or perhaps it was my song lyric rhyming Spectrum with rectum) began to flow. Anyway, this downhill flow had now achieved sufficient velocity so that late in the day I received a call from a nice guy who he said was the manager of Field Supervision for Eastern Wisconsin. He called me from your southeastern office, and was following up. He said that this was based on a request from corporate and indicated that he would dig into my issue with the local office and would get back to me RSN. He also said that he had two main goals. The first was to solve my problem and the second was to find out what kind of screw-ups had caused this problem to end up on his desk. I think he was a bit annoyed that a VP had kicked this problem into his Inbox. I asked him if he had read my email, and he said he had not yet seen it. Really? He never did get back to me, but sent someone else instead.

The next day late in the day. I received a call from Field Sup. Mgr. One who he said is in charge of the local Field Supervisors, and Field Supervisor One's boss. (This is number six technician if you are counting, as I am.) He said that he was in my neighborhood today with a tech doing some testing and had positive results to report. I questioned him about how his testing differed from the bad tests that Field Sup. One had reported to me last week. He said that he had not spoken with Field Sup. One because as you know he works Wed. to Sat.

Note: How the hell would I know that? I am not and do not want to be involved in managing your company much less your personnel schedules. Although I think, I have learned your management structure over the past five weeks, because I have met or spoken with all of them. If pressed, I could easily whip up a local Spectrum org chart. My job as I see it, as an unsatisfied paying customer is only to point out the flaws and deficiencies in your business service delivery as I see them.

I then pressed Field Sup. Mgr. more about the testing, and he said he was using a modem provisioned for 600Mbps and his phone and laptop. He said that he really did not trust the laptop because it was so loaded with corporate software overhead (vpn, encryption etc.) that it would skew the results. I asked him if he had tested where the fiber changed over to coaxial/copper and how far away from this subdivision that was. He said no and that he did not know. This Again! Really? One of the many key things that I have learned over my thirty years in the IT business is that consistency of test methodology logic is important. Randomly switching out modems and laptops until you get the desired results is a bit of a shotgun approach and appears to me to be doomed to failure.

Note: Is it not possible to give your techs the tools they need to do their jobs? A meter and a phone are not the proper testing tools when most people are connecting computers to your network. It may seem silly, but how about you actually give them an Ethernet/wireless laptop that they can use for testing? Ideally, it would not be used for anything else but this. You do not have to call it a laptop, you can call it a meter if you like.

I also shared with Field Sup. Mgr. One some info including my own testing which I had previously reported via email to Field Sup. One a day earlier. This was news to him, because of course he had not spoken with Field Sup. One yet. Apparently, your business has not yet discovered email as a valuable communication tool. God forbid you would use twenty-year-old database technology for the techs to enter case notes, and share that across the corporation with something like SharePoint. He said that he ran out of time today, but would return tomorrow accompanied by Field Supervisor One to do more testing at my PED and *speak with me personally*.

Note. Oh, Oh, does this mean more trying to fix this mentally with me will be in play? Or does it mean that I am going to get a modem provisioned at 600mbps to be able to get my provisioned 400Mbps? Stay tuned for the next episode…

The next day, Field Supervisor Mgr. One and Field Supervisor Three showed up around midday. That is technician six and seven now if you are still counting. Mostly it was the first option from above, but by nicer guys at a higher level of competence and intelligence. They spent about half hour tapped into my PED to some equipment in the van and made some phone calls. **In the three hours or so that they were here in the house, the speeds got progressively better, but only at speedtest.net.** I suggested using a scientific method of testing three sites and averaging them out, but that did not fly with them. I did notice on a trace route test, that Charter redirects from speedtest.net to their own server and Field Supervisor Mgr. One readily owned up to that fact. There were also wide variations on speed depending on if you use IE, Edge, Chrome, Firefox, or Pale Moon browsers. I did not see a scientifically sound testing program in use here, and it led me to think that I do not understand all I know about this.

For example, my Surface Pro tablet had been doing about 100-150mbps on wireless and was doing 300Mbps by the time they left. This is with no changes to the router or the tablet. Go figure. This evening, I cannot repeat those results.

On my one Ethernet, connected computer Field Supervisor Three reset the Ethernet card in my computer speed from 1 GB full duplex to auto and back and claimed some improvement from that. After they left, I could no longer achieve the same speeds either wired or wireless.

I think that a couple of things happened here. First, they did some provisioning tweaking of my connection from the van, which did not take immediate effect, as the modem was disconnected and turned off for the testing. I think some evidence for this idea is that my upload speed seems to have moved from a consistent 20mbps or less, to a consistent 22-23mbps. Second; bombarding your speedtest.net server repeatedly perhaps did some kind of temporary data caching and improved the test results.

I do not want to seem like a cynic, but my CST continuous speed tester software still shows my speed at or below 250mbps, and all the other nine speed test sites show results well below my now provisioned 450mbps on an Ethernet connection.

My five wireless “n” machines (300Mbps max) continue to get 60-100Mbps. On one of these, I got 150mbps last week and only 60mbps today.

My three wireless "ac" (600mbps max) machines continue to get 150-250mbps.

The next day I left a voicemail for Field Sup. Mgr. One making a request to try their 700Mbps test modem here. Field Sup. Mgr. One called me back today; he is coming tomorrow with the test modem they have been using for final testing here.

Meanwhile (I had some time to kill) so I searched the Spectrum page on the web to see if I could notice any mandatory disclaimers resulting from your loss in recent litigations, $60 million FCC fine, and government forced marketing changes in NY state.

https://venturebeat.com/mobile/charter-settles-new-york-internet-suit-with-record-fine-and-spectrum-refunds/

All I found was this:

Go Faster with Spectrum Internet® Ultra

- Choose Internet Ultra for speeds starting at 400 Mbps (wireless speeds may vary)
- Enjoy a faster download speed, more consistently than any other provider.††

††Based on the latest FCC Broadband Report (in tiny print at the bottom of the page)

A little further research revealed that this report was generated from the broadband providers own self-reporting to the FCC, and interestingly enough a search the 50 page pdf of this 2020 report and appendices for the keywords of Charter or Spectrum came up empty. I also found no comparisons of speed or anything else in the report with any other company. Go figure!

I did find this in an appendix however:

2020 FCC Report Appendix (again, self-reported)

State	10/1 Mbps	25/3 Mbps	50/5 Mbps	100/10 Mbps	250/25 Mbps
Wisconsin	67.3%	56.1%	51.1%	48.2%	1.4%

So I appear to be trying to join the 1% club!

A few days later, Field Sup. Mgr. One arrived with the test modem around midday. On speedtest.net, the new Ubee modem delivered 600Mbps down and 40Mbps up to his Dell laptop using Chrome, either wired or "ac" wireless. It delivered less using IE. It delivered the same also Ethernet and wireless on his smartphone, again using Chrome. It delivered 400 plus Mbps consistently to my Ethernet computer, 125Mbps wireless "n" to the same computer two feet away from the NETGEAR XR1000 router. It delivered approx. 150-250Mbps to my wireless "ac" computers and 50-100Mbps to my wireless "n" computers all tests using a 5.2GHz connection. Use of Firefox, IE, or Pale Moon did not seem to impact the performance.

Switching back to the Technicolor 400Mbps modem brought back the inconsistent speed tests ranging from 350-450Mbps tests, and a max of 200Mbps to a wireless "ac" tablet. During all of these tests, the CST software reported a max of 250Mbps.I would call this *Internet speed* versus *Charter speed.*

I again asked if anyone else in my area had speed above 100Mbps, and how far away the fiber ended and their copper started. They said, they do not know, to both of these questions repeatedly which means you are not willing to share this information apparently.

I do not hold Spectrum responsible for the networks outside of their own, but testing speed at **one** website redirected to your own network repeatedly cannot really be seen as indicative of a customer's experience on the Internet. Even then, the test results are not consistent and repeatable to your own redirected speedtest.net site. When still on your network, test results at https://www.spectrum.com/Internet/speed-test are about half of that (200Mbps) but also inconsistent and can range up to 350mbps.

My takeaways from this whole Spectrum saga to this point are these:

- If you have the patience and persistence to stay after Spectrum and hold their feet to the fire, they eventually will and can make it better. It does not hurt if you are retired with some time on your hands and locked in your home due to a pandemic. After all, I went from a consistent 150mbps Ethernet to a consistent 300Mbps on my original test computer only on Spectrums network.
- Apparently, if you do not have a specific laptop with a Chrome browser and wireless "ac" you will not get consistent speed tests. Remember, three other Spectrum technicians could not achieve the speed at my house or at neighborhood PED's)
- Apparently, if you don't have a Spectrum smartphone with an OctaCore (dual quad core) processors and 10Gb Ram you will not get consistent speed tests (my wife's two smartphones will not crack 100Mbps)
- OS and network hardware are more important beyond 100Mbps. If you have "n" wireless, or gigabit Ethernet, you will not get there consistently. If you have "ac" wireless, you will not get there either. My six month old Surface Pro tablet with "ac" wireless you will not get you there with either Firefox or Edge.
- Firewalls, browser extensions, and antivirus software do not appear to be significant factors in bandwidth testing**.**
- Browser software like IE, Firefox, Edge, and Pale Moon will not give you consistent Spectrum speed tests
- Spectrum will not put 1GB files on one of their network servers for download testing, because they cannot maintain 400Mbps for more than 10 seconds at a time
- 400Mbps of Charter speed is actually about 250Mbps or less of actual Internet speed as determined by CST and overall user impressions
- Spectrum appears to have these same problems with their 600Mbps-40Mbps (commercial) and 940Mbps/40Mbps (residential) copper deployments
- Symmetrical 1gb fiber deployment is our only hope in the US as we currently rank 11th or 12th in the world in broadband speed availability

I am reluctant to revisit the whole hops thing, as I pretty well beat this horse to death in my last email and song. But these traceroute results just appear to me to be a bit schizophrenic. Excessively ping ponging around, via your cobbled together legacy networks, and peering agreements apparently, to get to the POP[6] backbone. I have no malicious or nefarious intent here, am just trying to understand this. There are many routers involved here and latency can exceed 250ms in the later hops. Since traceroute measures the time it takes to get each response it has no way of knowing if any delays were encountered on the way out to the destination or on the way back, potentially providing misleading results.

My conclusion is that the Spectrum network will not consistently deliver 400Mbps to me or anyone else on my node even on your own network, but it is an *upgrade* from my previous 100Mbps service. Customers like me must decide if half of a promise is worth an extra twenty bucks a month on an already overpriced noncompetitive service.

While I will not concede that your service meets my expectations, I will concede now that my results here are as good as you can currently make it without further investments on your part.

[6] *Internet Point of Presence*

Intro: My Dear, Dear Spectrum, does our unrequited love affair need to continue, or will you love me tomorrow? Let us slow my roll now, like my Internet, with another love song from me to you.

Got The Fiber Blues
I wrote you a letter and expected to hear crickets
Cause my Internet packets still act like they have rickets
With phone calls you responded and technicians you did dispatch
They did their best but all they could do was make a patch
Chorus: My packets ping pong around your routers
Slowing me down and making me a doubter
Your monopoly behavior is telling
But it's not to me you will be selling
The Millennials may use it for their mobile phone
But I want some real speed to come to my home
Chorus: My packets ping pong around your routers
Slowing me down and making me a doubter
Your kind has promised fiber for thirty years
Yet your network of band aids are leaving me in tears
We all want a network of fiber glass
Yet the copper you give me is just a pain in the ass
Chorus: My packets ping pong around your routers
Slowing me down and making me a doubter
Your mergers make you all more money
But to those of us who suffer, this is not very funny
Discount and freeze the cost if you want to be a suitor
Till you can get some overdue fiber to my computer
Chorus: My packets ping pong around your routers
Slowing me down and making me a doubter

I will grant you that network upgrading is a bit of a chicken and egg thing. On the other hand, if you build it they will come. The 11 countries ahead of us on bandwidth must know something we do not or that we willfully ignore in this country.

Predictions can be difficult:

> *IBM introduces the 5150 PC and, with it Microsoft, releases DOS ("640K ought to be enough for anyone")* — Bill Gates 1981)
> https://quoteinvestigator.com/-2011/09/08/640k-enough/

> *"Residential services will depend on high-speed Internet access. High-speed today is 100 Kbps to 900 Kbps. This will increase in the future to 1 Mbps to10 Mbps for each household."* https://www.pearsonhighered.com/assets/-samplechapter/0/1/3/0/0130281360.pdf

"We don't like their sound, and guitar music is on the way out." — Decca Recording Co. rejecting the Beatles, 1962. https://quoteinvestigator.com/2013/04/27/guitars-out/

So on my own personal computers; memory has increased from 640k to 64 gigabytes in 25 years. About a 10,000% increase. My promised telecommunications speed has gone from 1200kbps to 400Mbps in 35 years. About 3000% increase.

Here is what your competition would be like if we actually had a free and open market. You know what I mean here, that whole invisible hand of the free market thing that conservative businessmen like to talk endlessly about.

- Charter/Spectrum 940Mbps/40Mbps$89.99/ $114.99
- Verizon FiOS Gigabit Connection provides 940/880 Mbps speeds for $69.99 /mo.
- AT&T Internet 1000 940/880Mbps $60 /mo.
- Gigabit Internet by XFINITY from Comcast 1 Gbps/35 Mbps $70.00 /mo.
- Gigabit Pro by XFINITY: 2Gbps/2Gbps (Fiber to the Home / FTTH) **OMG!**

In the end, it seems to me that Charter/Spectrum would benefit from Cranium-Rectal inversion therapy to be able to fully grasp the need to build a fully fiber optic gigabit symmetric network into the homes of your customers. Once this procedure is complete, you may just discover that worshiping at the altar of Wall Street is in fact a death cult, and that we humans do in fact have a higher purpose than to be coin-operated, terrestrial, bipedal, carbon based lifeforms.

PS. Hey Charter, one of your tone deaf and clueless competitors just threw in the towel, see below. Here is your chance! And it looks like there is another Federal corporate welfare program coming to you in the new infrastructure bill. Now your response is that you want to have data caps put in place as a condition of your merger. You are deploying asymmetric 1Gbps fiber in some locations. 940Mbps down and 40 Mbps up? Really?

Spectrum, like other big companies, seeks to abandon its merger promises
https://www.latimes.com/business/story/2020-07-22/spectrum-merger-promises

AT&T Lobbies Against Nationwide Fiber, Says 10Mbps Uploads Are Good Enough (arstechnica.com) 192

Posted by BeauHD on Monday March 29, 2021 @08:01PM from the don't-fight-it-embrace-it dept.

AT&T is lobbying against proposals to subsidize fiber-to-the-home deployment across the U.S., arguing that rural people do not need fiber and should be satisfied with Internet service that provides only 10Mbps upload speeds. Ars Technica reports: AT&T Executive VP Joan Marsh detailed the company's stance Friday in a blog post titled "Defining Broadband For the 21st Century." AT&T's preferred definition of 21st-century broadband could be met with wireless technology or AT&T's VDSL, a 14-year-old system that brings fiber to neighborhoods but uses copper telephone wires for the final connections into each home.

"There would be significant additional cost to deploy fiber to virtually every home and small business in the country, when at present there is no compelling evidence that those expenditures are justified over the service quality of a 50/10 or 100/20Mbps product," AT&T wrote. (That would be 50Mbps download speeds with 10Mbps upload speeds or 100Mbps downloads with 20Mbps uploads.) AT&T said that "overbuilding" areas that already have acceptable speeds "would needlessly devalue private investment and waste broadband-directed dollars." "Overbuilding" is what the broadband industry calls one ISP building in an area already served by another ISP, whereas Internet users desperate for cheaper, faster, and more reliable service call that "broadband competition."

PPS. Here is yet another example of the kind of wrong-headed thinking going on these days:

ISP Imposes Data Cap, Explains It To Users With Condescending Pizza Analogy (arstechnica.com) 85

Posted by BeauHD on Friday April 02, 2021 @06:00PM from the poorly-thought-out-illustrations dept.

An anonymous reader quotes a report from Ars Technica:

Cable company WideOpenWest (which markets itself as WOW!) yesterday told customers that it is imposing a data cap and explained the change with a pizza analogy that would seem more appropriate for a kindergarten classroom than for an email informing Internet users of new, artificial limits on their data usage. The email said WOW is "introducing a monthly data usage plan for your Internet service on June 1, 2021" and described the system as follows:

"What's a monthly data usage plan? Let us illustrate ... Imagine that the WOW! Network is a pizza. Piping hot. Toppings galore. Every WOW! Customer gets their own slice of pizza, but the size of their slice is dependent on their Internet service plan. While customers who subscribe to 1 Gig get the largest slices, those with Internet 500 get a slightly smaller piece, and so on. But, it is all the same delicious, high-speed pizza that you know and love. Now, say you are not full after your slice and you grab another. That extra slice is like a data overage. Do not worry -- we got extra pizza... umm, data... just in case. If you exceed your data allowance, we will automatically apply increments of 50GB for $10 to your account for the remainder of the current calendar month. Total overage charges will not exceed $50 per billing statement no matter how much data you use. Even better -- the first time you experience a data overage, we'll proactively waive fees."

The email did not mention that, unlike pizza, Internet data does not run out and that there is plenty for everyone as long as a network is properly constructed and provisioned. And despite paragraphs of comparing data to pizza, the email literally never says how much data customers will be allowed to use before they are charged extra. The answer is in a newly updated "network management practices" document that says the monthly cap will range from 1TB to 3TB: the 50Mbps download plan gets 1TB, plans between 100 and 300Mbps download speeds get 1.5TB, the 500 and 600Mbps plans get 2.5TB, and the gigabit plan gets 3TB.

WOW has over 800,000 Internet customers in parts of Alabama, Florida, Georgia, Illinois, Indiana, Michigan, Ohio, South Carolina, and Tennessee. In a separate document, WOW says that "unlimited data plans may be added for an additional monthly charge" but does not say how much it will cost.

It is apparently not a bad April Fools' Day joke, either. People in the DSLReports forum have reportedly confirmed the changes with a WOW representative.

Reference

Telecom Book of Broken Promises.pdf http://teletruth.org/

"We are in the middle of a pandemic. So much of modern life has migrated online. As a result, it has become painfully clear there are too many people in the United States who lack access to broadband. In fact, if this crisis has revealed anything, it is the hard truth that the digital divide is very real and very big" https://docs.fcc.gov/public/attachments/FCC-21-18A3.pdf

Dear, Dear, Dear Spectrum

(Now a Trilogy with another 3000 words)

What has been missing here so far in this saga is for you to add some insult to injury. Well, it came in the mail today and it was only a matter of time. So you billed me for the extra twenty bucks for an upgraded monthly service, I have not been able to achieve for the past six weeks, but you have been working on it, or at least pretending to. This is in itself bad enough, but you have the combination of ignorance, incompetence, and malevolence to now add an additional charge of $50 for a service call. This is salt in the wound and has further provoked me, yet again.

So once again provoked by your company, I spoke with a nice gal in billing who could not figure out a way to deal with this issue and so she transferred me to her manager, who turned out to be a real ass. This is a great personality attribute for a Customer Service Mgr.

He was insistent that since the first two techs indicated that the problem was my equipment so the charge was applied even though I was not notified by phone support that I might incur this charge when I asked him to dispatch a tech. He said that this was not a requirement by their policy.

Keep in mind that your first tech was well intentioned but ill equipped to solve the problem, your second tech was a sarcastic abusive bull shitter who readily admitted that his own laptop would not achieve the rated speed, but pronounced my original router, and all eight of MY computers bad, and your system OK based on his personal phone connected to MY wireless router.

There is a lot of talking out of both sides your mouth here, by saying that the router is MY equipment that they are not responsible for, while at the same time pronouncing your system OK, based on one of your phones connected of course to MY router.

Billing had no records of the third tech not being able to achieve the speed on his phone, nor any info regarding his boss re-provisioning the line and making it better but not fixing it, the three modem replacements, or any subsequent local and neighborhood testing and home visits by five more technicians, one of them twice.

He said that there was *nothing he could do* for me. That sounded like an echo to me as I may have heard that before from you. I am going to suggest those six words as a motto for your corporation.

I know that this technical issue has not yet resolved but it looks like some intervention in updating the recordkeeping is going to be required for me to eventually come to terms with your billing. Am I on the hook for the next 7 service calls and you just have not billed me yet?

Got The Spectrum Billing Blues

Got your bill today and I did learn
You charged me for what you did not earn
Called your billing to complain
There's nothing we can do was their refrain
Chorus: It's not us, it's you
There's nothing we can do
Waited on hold for your support
Then support joined me on hold for their support
So apparently karma is still alive and well
We all get to live in Spectrum hold queue hell
Chorus: It's not us, it's you

There's nothing we can do
Billing can only go by the notes in the file
But it's your lack of notes that I revile
You got off easy in your lawsuit in New York
Yet the bill you send me is full of pork
Chorus: It's not us, it's you
There's nothing we can do

Well, since this saga has been going on for so long now, it is about time for a summary on where we stand, nowhere, and for me to provide some additional information.

Update

Got a call today from Spectrum Regional Field Service Mgr., Eastern Wisconsin, 39 days into this and still counting. Had a chat, but he remains unconvinced that the problem is the network and not me. So I sent him some additional info and we agreed to chat later in the week, which by the way did not happen. No response to my emails either, just more one-way correspondence with Spectrum.

In addition to providing you with new information on my contact with billing, I have included my previous *one-way* email correspondence with one of your Field Supervisors for you to review.

Below is a brief for me, summary of my experiences with Spectrum technical support over the past six weeks to this point in time.

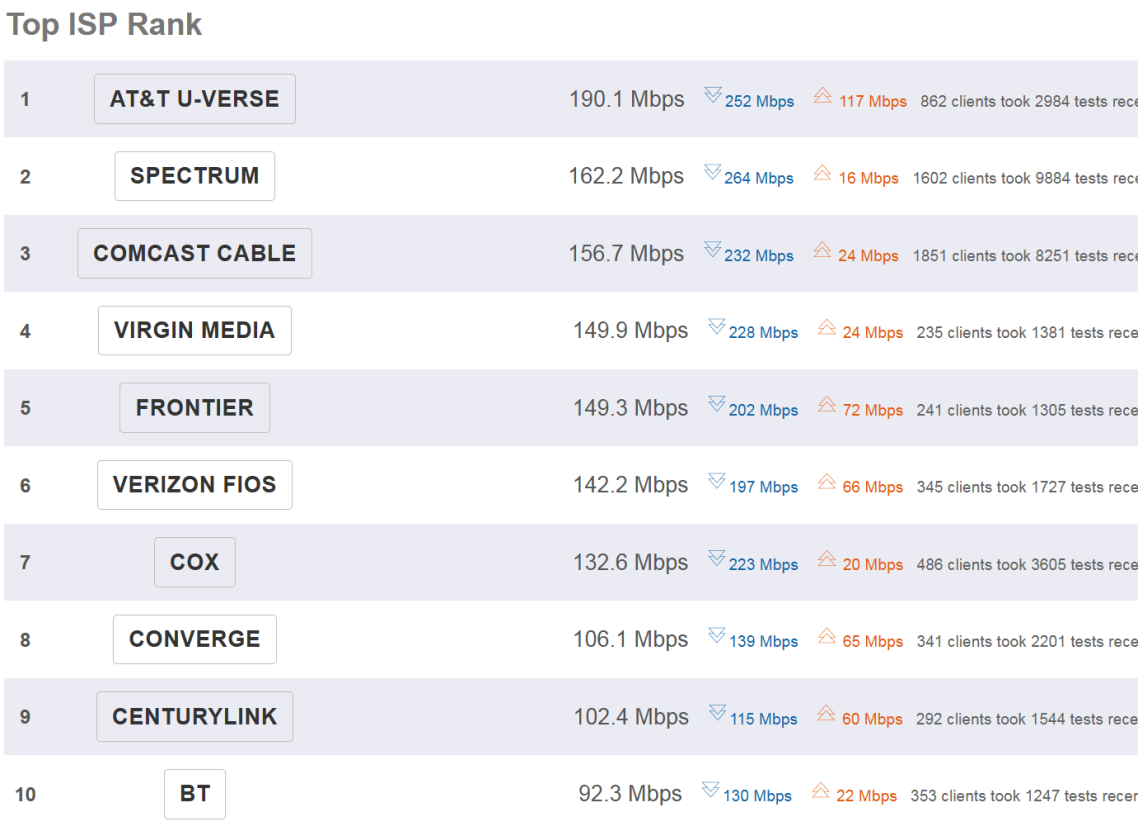
The Cast of Characters responding to my speed complaint in order of appearance at my home:

1. **J. did not have a laptop with which to test. Used his phone to get the provisioned speed. Said there was nothing else he could do.**
2. **P. had a laptop but did not use it. He said he had tried this before and could not get provisioned speed at modems with his laptop but did not know why. He actually refused my invitation for him to do so. He ended up using his phone to get the provisioned speed from my router that he pronounced bad (stuck). I showed him that my computer could not, but he said there was nothing else he could do.**
3. **C. did not have a laptop to use to test. He used my laptop years ago to install my service and this annoyed me then, and still does now. Used my computer and his phone here and could not get provisioned speed. He called his boss and got this whole new process moving.**
4. **W. could not achieve provisioned speed on wireless, wired to router or modem with his HP laptop. Said there was nothing else he could do.**
5. **J. R. could not achieve provisioned speed on wireless, wired to router or modem with his HP laptop. Also not at neighborhood PED's.**
6. **B. did not bring a laptop to the party, just questioned, and blamed my equipment.**
7. **J. S. could in fact consistently get provisioned speed on his Dell laptop wired/wireless and phone wired/wireless, but only for a 30 sec. duration at only one test site.**

The true worth of an ISP
https://testmy.net/legit-speed-test.php

In our opinion, the true value of an Internet service provider, ISP, is not always measured in megabits. Truly great providers maintain good peering relationships with other providers so their users sustain quality speeds throughout the Internet, not just nearby.

What good is an Internet connection if you can only get your advertised speeds on your provider's internal network (or on the edge of their network)? It is the **INTERnet not INTRAnet that** you are paying them monthly for. If you run a speed test elsewhere and get higher results than you get here, poor provider peering may be to blame.

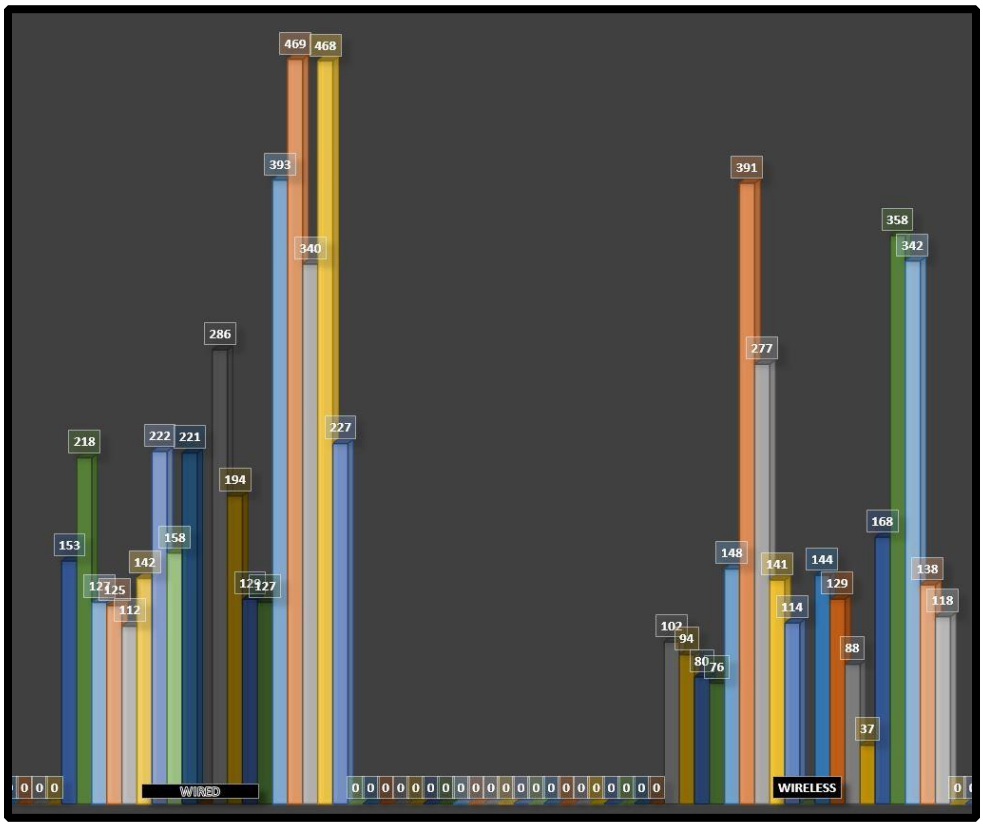


https://testmy.net/hoststats **2023**

Dear, Dear, Dear, and yet again Dear Spectrum

(The final side of a double album set, and yet you made me write another 6000 words)

Continuing with the theme from my last email, "It's you and not me," what is seen below is a visual representation of my speed test data provided to you previously in an Excel worksheet.



The numbers in the chart above represent the Mbps speed achieved.

As you can see, only in two of the tests was the provisioned speed achieved when wired to the router via Cat7 cables. Both of these were on the Random Lake (SPECTRUMNET) test site. The highest speed achieved on the Wisconsin Rapids site was 222Mbps well short of the provisioned speed.

No tests on the wireless category achieved the provisioned speed, nor were they expected to, despite the computers being placed within four feet of the router. The highest readings were again achieved on the Random Lake speed test site, or in other words the Charter/SPECTRUMNET.

In addition, twenty-two speed test sites shown in the graphic below, all default to Renaissance Learning, Inc. Wisconsin Rapids, WI as the optimal speed test site. Using my Spectrum Internet connection, this test site shows lower speeds than the preferred site of Spectrum technicians, Random Lake Charter/SPECTRUMNET.

https://myspeedcheck.net/speedtest/Mediacom (click on the chart to follow.)

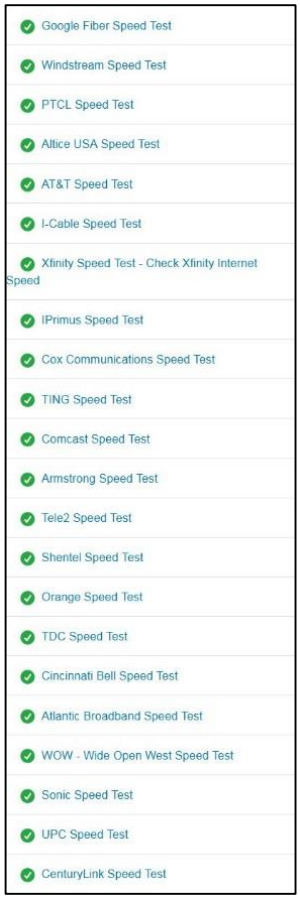
The Real Digital Divide? Advertised Vs. Actual Internet Speeds

Our data shows that 15% of Internet users in the U.S. — nearly 45 million people — are not getting the speeds they're paying for. On average, Americans are getting 79% of the speed they pay for.

Cable and fiber are by far the most common home Internet connections in the U.S., but they are also the most likely to under-deliver, with most people getting only a quarter of the speeds they are paying for.

Allconnect's internal data shows that cable and fiber Internet providers advertise faster speeds than they actually deliver, while the FCC's report shows the opposite.

https://www.allconnect.com/blog/advertised-vs-actual-Internet-speeds



Research from Purdue University FCC/M-Lab Speed Ratios

Table shows average advertised FCC speeds* as well as average test speeds from M-Lab. The download and upload ratios were calculated by dividing the FCC speed by the M-Lab speed.

https://pcrd.purdue.edu/the-real-digital-divide-advertised-vs-actual-Internet-speeds/

Meanwhile where I live:

Avg. M-Lab Download (Mbps)	Avg. M-Lab Upload (Mbps)	FCC Avg. Download (Mbps)	FCC Avg. Upload (Mbps)	Download Ratio	Upload Ratio
25.859	5.798	146.063	10.775	5.6	1.9

**According to the Federal Communications Commission (FCC) Form 477 ISP self-reported dataset—which is historically been proven to significantly overestimate both availability and the speeds provided by Internet providers.*

When I mentioned my issues with getting Netflix and Amazon Prime Video to play in HD, and wondered which of them was throttling me, the Spectrum Field Sup. Mgr. told me that they do not throttle speed. But then one needs to ask why does the below exist in your residential Internet acceptable use policy?

Charter uses a variety of reasonable network management tools and practices consistent with industry standards. In the event the periods of congestion necessitate such management, Charter has available the following tools and practices (without limitation and as may be adjusted over time):

(i) use of an upper limit of bandwidth allocated for uploading of files during congested periods;

(ii) (ii) Subscriber Traffic Management (STM) technology to temporarily lower the priority of traffic with the greatest impact on peak congestion; (iii) spam filtering and detection techniques; and (iv) measures to protect the security and integrity of its network, resources and subscribers. In limited instances if employed, **these techniques may affect the throughput rate at which subscribers may send and receive data**, the ability of users to establish session connections within the network, or result in the delay of certain traffic during times of peak congestion. https://www.bandwidthplace.com/bandwidth-throttling-and-your-spectrum-Internet-service/

Here is an interesting take on your business model that I ran across online.

"They oversell their capacity on the basis that there won't be a time when everybody uses it at once. The phone companies have been doing this for years. There are network planners who work out exactly how much capacity they need to stay ahead of demand.

There is a limit based on hardware within the ISP. This is much larger than any one user, but it is likely to be much less than the sum of all the provisioning for all the users. This works much like bank deposits do - the ISP depends on the users not demanding their full bandwidth all at the same time.

How much total speed to they have? That is hard to answer because it is not a single really big connection. They might have terabits of connection to some ISP's and only 10 or 100 gigabits to others.

ISPs get the bandwidth they sell from IXPs, or Internet Exchange Points, and transport it to customers. At each IXP, they are able to meet and exchange traffic with a set of other ISPs.

So the total amount of bandwidth an ISP has to sell is the sum of the bandwidth it's able to deliver to and from all IXPs combined, less any inefficiencies due to lack of interconnections (peering) at those IXPs, plus a little bit because occasionally the ISP's own customers will want to talk to each other, and that traffic doesn't need to go to an IXP and back. Speed x distance = cost.

The closer a customer is to the IXP they are using bandwidth from, generally speaking, the faster their connection will be at a given price. But since customers generally want to use bandwidth from a lot of different IXPs, and do not distinguish between them, in reality each customer is getting a blend of bandwidth sourced from IXPs all over the world.

A good ISP is going to have multiple connections with the greater Internet -some combination of direct ISP-to-ISP connections, or ISP-to-datacenter, or ISP-to-Internet-exchange.

This means that they'll try a variety of mechanisms to prevent excessive use by a few customers from making too many of the well behaved customers from leaving for another ISP, calling the help desk, filing trouble reports, or even (in the rare case where it's possible) jump to another ISP.

They want enough capacity to keep the revenue stream flowing and deal with some peaks, but not waste money providing peak service that's rarely used. It is like a fast-food restaurant pre-making fries or burgers to anticipate a lunch rush - keep the customers happy but do not have too much waste at the end of the rush.

The further you get away from the customer, the less meaningful the idea of a "total divided to users" is. It works best on a neighborhood basis. It might work OK on a city basis, if the ISP has only a single main connection to its infrastructure. It barely matters across something the size of a US state. Not at all across a country. And is laughable across a continent."

https://www.quora.com/How-ISPs-determine-speed-for-the-users-What-is-the-total-Internet-speed-an-ISP-has-and-according-to-what-it-gets-divided-to-users?share=1

"While the infrastructure and services provided by Spectrum have seen high ratings, their reputation with the Better Business Bureau (BBB) is less promising. The BBB gave Spectrum an **F** rating, the lowest grade possible. This measurement seeks to evaluate how a company interacts with its customers and can reflect a company's customer service. The biggest drawback to Spectrum Internet is its history of poor customer service, as evidenced by its BBB and J.D. Power reports. Spectrum's monthly fees are also a bit higher than other cable providers."

https://www.reviews.com/utilities/Internet/charter-communications-review/

43 US Internet Exchange Points

Phoenix-IX - The Phoenix Internet Exchange	Phoenix, AZ	USA	N/A
TIE-PHX - Telx Internet Exchange Phoenix	Phoenix, AZ	USA	1
CIIX - CENIC International Internet eXchange	Los Angeles, CA	USA	1
EQIX-LA - Equinix Exchange Los Angeles	Los Angeles, CA	USA	2
LAIIX - Los Angeles International Internet eXchange	Los Angeles, CA	USA	1
PAIX-PAO - Peering And Internet eXchange Palo Alto	Palo Alto, CA	USA	4
SFMIX - San Francisco Internet eXchange	San Francisco, CA	USA	1
EQIX-SJC - Equinix Exchange San Jose	San Jose, CA	USA	2
IX-Denver - Interconnection eXchange - Denver	Denver, CO	USA	N/A
TMRK-MIA - Terremark NAP of the Americas	Miami, FL	USA	1
TampaIX - Tampa Internet eXchange	Tampa, FL	USA	N/A
TPA-IX - Tampa Internet Exchange	Tampa, FL	USA	2
PAIX-ATL - Peering And Internet eXchange Atlanta	Atlanta, GA	USA	1
TIE-ATL - Telx Internet Exchange Atlanta	Atlanta, GA	USA	1
ChIX - Chicago Internet eXchange	Chicago, IL	USA	1
EQIX-CHI - Equinix Exchange Chicago	Chicago, IL	USA	2
Midwest-IX - Midwest Internet Exchange	Indianapolis, IN	USA	3
KCIX - The Kansas City Internet Exchange	Kansas City KS, KS	USA	2
BOSIX - Boston Internet Exchange	Boston, MA	USA	1
DET-IX - Detroit Internet Exchange	Detroit, MI	USA	3
MICE - Midwest Internet Cooperative Exchange	Minneapolis, Minnesota	USA	1
OmahaIX - Omaha Internet eXchange	Omaha, NE	USA	1
LINX-NoVA - LINX North Virginia	Washington D.C., North Virginia	USA	3
Big-APE - The Big Apple Peering Exchange	New York, NY	USA	1
EQIX-NYC - Equinix Exchange New York	New York, NY	USA	3
NYIIX - New York International Internet eXchange	New York, NY	USA	3
PAIX-NYC - Peering And Internet eXchange New York	New York, NY	USA	3
TIE-NYC - Telx Internet Exchange New York	New York, NY	USA	2
iX-OKC - Internet eXchange Oklahoma City	Oklahoma City, OK	USA	N/A
OIX - Oregon Internet Exchange	Eugene, OR	USA	N/A
SOAX - Southern Oregon Access Exchange	Medford, OR	USA	1
NWAX - The Northwest Access Exchange	Portland, OR	USA	2
PitX - The Pittsburgh Internet Exchange	Pittsburgh, PA	USA	N/A
DECIX-Dallas - DE-CIX Dallas Fabric	Dallas, TX	USA	N/A
EQIX-DAL - Equinix Exchange Dallas	Dallas, TX	USA	1
PAIX-DAL - Peering And Internet eXchange Dallas	Dallas, TX	USA	2
TIE-DAL - Telx Internet Exchange Dallas	Dallas, TX	USA	2
MEX-IX - MEX-IX McAllen	McAllen, TX	USA	N/A
EQIX-ASH - Equinix Exchange Ashburn	Ashburn, VA	USA	4
PAIX-VIR - Peering And Internet eXchange Virginia	Vienna, VA	USA	1
PAIX-SEA - Peering And Internet eXchange Seattle	Seattle, WA	USA	2
SIX - Seattle Internet Exchange	Seattle, WA	USA	1
MadIX - Madison Internet eXchange Peering Point	Madison, WI	USA	N/A
MKE-IX - Milwaukee Internet Exchange	Milwaukee, WI	USA	N/A

****UPDATE****

I had a call today from a Spectrum OP VP regarding my issues. She seemed genuinely interested and yet uninformed regarding my latest communications and test data, or pretended to be in an attempt to hear my side of the story directly from me. She told me that she had removed the truck roll charge from my bill, and that these charges are automatically applied unless the technician removes them. Automatic opt in, no notice, how nice.

She asked me what I wanted and I told her 1Gbps symmetrical fiber to my house and to grow up to be George Jetson. But seriously, I explained how the price is too high for the limited service, and that I am looking for a discounted rate, as I am now sure that Spectrum cannot actually deliver 400Mbps to my house. Also that I am highly confident that based on my very extensive testing, and that this is not the fault of my equipment.

If the Spectrum 400Mbps service is only available to specific types of computers, phones, or Internet browsers, and then only to one Random Lake test site (SPECTRUMNET), then their advertising should reflect those conditions and stipulations.

She was primarily looking to find a resolution to this issue. She agreed to further consult with her team, look further into the issue, and get back to me later this week. Meanwhile I will provide some additional info.

Spectrum Internet Plans and Prices

Plan	Download Speeds up to	Price per month
Spectrum Internet	200 Mbps	$49.99
Spectrum Internet Ultra	**400 Mbps**	**$64.99**
Spectrum Internet Gig	940 Mbps	$104.99

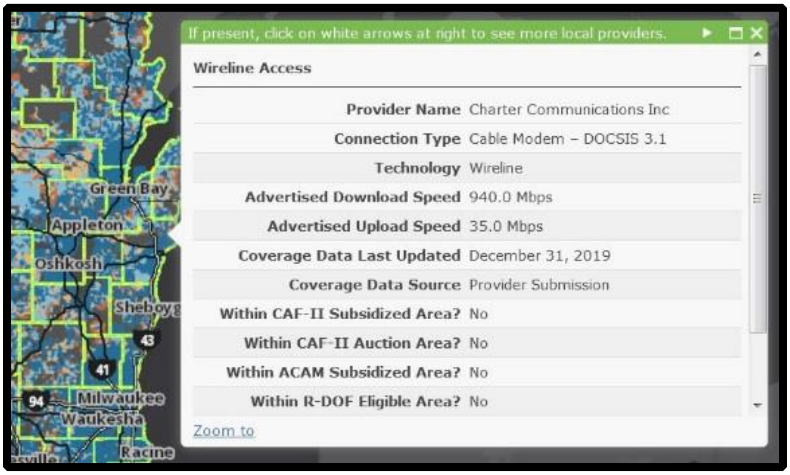
Data effective 1/19/2021

Remember the competitive examples from the previous email?

Here is what your competition would be like if we had a free and open market. You know what I mean, that whole invisible hand of the free market thing businesses like yours like to talk endlessly about.

- Verizon FiOS Gigabit 940/880 Mbps speeds $69.99 /mo.
- AT&T Internet 1000 940/880Mbps $60 /mo.
- Gigabit Internet by XFINITY from Comcast 1 Gbps/35 Mbps $70.00 /mo.
- Gigabit Pro by XFINITY 2Gbps/2Gbps (Fiber To The Home (FTTH) **OMG!**

According to the Wisconsin Broadband map, Spectrum offers 940Mbps in my state but cannot even provide 400Mbps to me?



https://maps.psc.wi.gov/apps/WisconsinBroadbandMap/

Given the current Spectrum plan above, I do not understand why I should be paying **$94.99** for what appears to be a fairly reliable 200Mbps Internet connection, but not the promised 400Mbps.

It seems like your installation system is setup to provide a false and phony reading on a phone via a SPECTRUMNET. This is exactly what the first and second on-site technicians did here at my home.

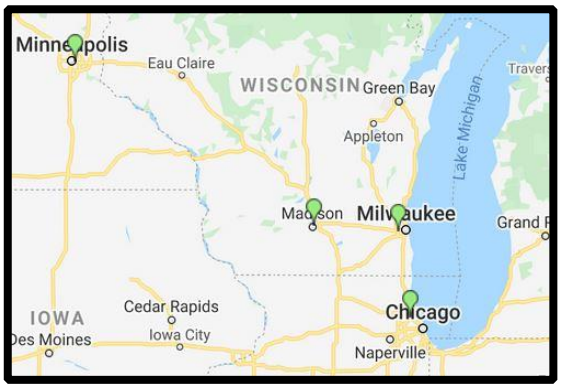
A more realistic speed testing process would involve a Charter FTP server located at your first hop datacenter. This site could then be used to download sample 1GB files for testing actual download speed, at least to your first hop. Again, this whole idea of testing to a *local* server is an outdated and inaccurate historical remnant of the cable TV days of providing local cable television service to the home.

I believe that your advertisements should look more like this above:
https://www.spectrum.com/ultra (proposed)

Failing that approach, a speedtest.net site should be located on one of your network servers at your first hop of 096-034-023-212.biz.spectrum.com 96.34.23.212. IP2Location puts this at Fitchburg, WI. This appears to be an IXP and would be a much more realistic test in my mind.

When you stop and think about it, I am paying Spectrum for a connection to the Internet, not a Charter/SPECTRUMNET connection. My email and webservers are in Milwaukee. I am paying for a connection to the 100Gbps plus trunk speed Internet backbone via an IXP, not to some "random" server in Random Lake, Wisconsin.

About Internet Exchanges
An Internet exchange or IXP is a switching platform where Internet carriers can exchange peering traffic with each other. Exchanging peering traffic over an Internet exchange point rather than via direct peering enables a carrier to interconnect with multiple networks via one uplink and thereby reduce the cost and complication of peering.



In having my volunteered assistance in troubleshooting this problem over the past few months, I have asked all three of the Field Supervisor Mgrs. who came to my home the same two questions:

Is there anyone else in my node who has Internet provisioning above the standard 100Mbps service?

How far away from my location, does the fiber out of your office terminate and get changed over to copper?

Both of these questions seem to me to be important in troubleshooting the problem. Yet the answer to both questions from all three was, "I don't know." I might be able to understand if they do not want to say for some valid reason, proprietary corporate info, privacy, Homeland Security issues, their personal risk of possible offsite rendition if they tell, etc., but the answers should be that then. They did say that there are 210 devices on the local node. I have 10 of those myself.

The Field Supervisor Regional Manager when asked also did not know these answers but said that this information was in fact available to the Field Supervisor Mgrs. on their hand held devices. Go figure.

****UPDATE****

Got a voice mail today from the Field Supervisor Regional Manager (FSRM) saying that they were still analyzing the data and info that I sent them (or plotting my demise?) and would get back to me on Monday. Sent him an email agreeing with this plan and a note that since I am waiting until Monday to speak to him and not the VP, I am sending more info and I am a bit disappointed. No offense to you but I thought your boss and I hit it off over the phone yesterday, as we agreed on some things, and I made her laugh on a number of occasions. Yet another Charter unrequited love story I guess. Since we have only just met it is too soon to write a blues song about this one however.:-)

Since I had some more time, I did some more digging. More testing today. 14 hops to anywhere.

I have discontinued the use of the Open Visual Trace Route software since the Geo location has been inaccurate. Open Source Software-everyone can look at it, but no one apparently does.

I was working on my website today and had occasion to download a large file. I tracked the results and display them below. So in summary I am seeing a 50Mbps download, albeit via a wireless connection which reports in the 80Mbps range on the speedtest.net sites.

50.4Mbps FTP speed with a 775 MB file down from CyberLynk.net using WS_FTP software.

In thinking more about my slow FTP (file transfer protocol) like IP (Internet protocol) only different, I decided to run a trace route on CyberLynk.net , below where my website is, and compare it to the trace route I sent you earlier to Spectrum.com below. The good news is there is four less hops, but my packets have to bounce around Wisconsin, and then visit California and Texas before getting to CyberLynk.net in Franklin after one last stop in Chicago. I would like Spectrum to get me 400Mbps to an IXP like Madison or Chicago without chasing around the state and around the country. Remember that a trace route only gives you a small part of the overall picture and does not show delays really. I wish I had visibility into your peering agreements, and access to your checkbook. I think I could fix this for you.

Tracing route to CyberLynk.net 66.185.30.186

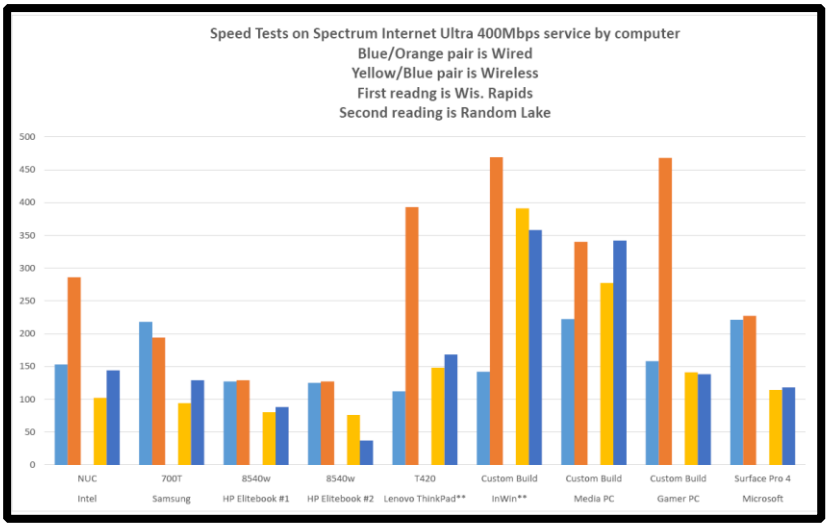
96.34.23.212 Fitchburg Wisconsin
96.34.30.25 Wausau Wisconsin
96.34.24.83 Eau Claire Wisconsin
96.34.24.136 Eau Claire Wisconsin
96.34.2.153 Riverside California
96.34.3.55 Dallas Texas
4.68.38.253 Dallas Texas
4.14.170.82 Chicago Illinois
66.185.29.234 Franklin Wisconsin

Trace route to spectrum.com 142.136.168.58

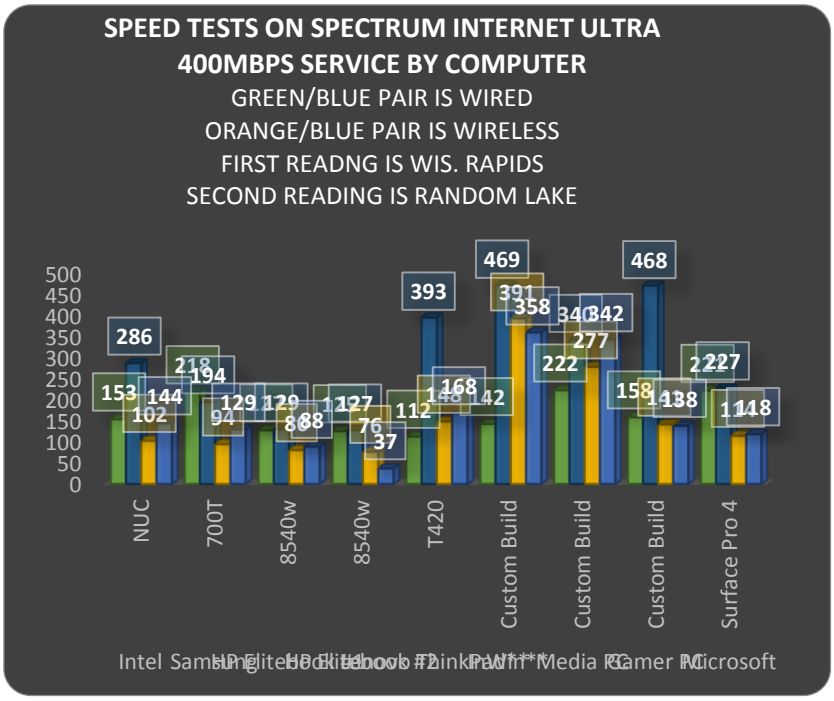
96.34.23.212 Fitchburg Wisconsin
96.34.30.25 Wausau Wisconsin
96.34.24.83 Eau Claire Wisconsin
96.34.24.136 Eau Claire Wisconsin
96.34.2.153 Riverside California
96.34.0.7 Ashburn Virginia
96.34.0.9 Ashburn Virginia
66.109.1.18 Chicago Illinois
66.109.6.21 Chicago Heights Illinois
66.109.10.99 San Jose California
66.109.10.93 San Jose California
66.109.6.245 Atlanta Georgia
165.237.51.245 Greenwood Village Colorado
165.237.4.131 San Jose California

Note: Geo locations from https://www.iplocation.net/ip-lookup

I also came up with what I think is a better visualization of my slow speed situation.



Another even better one:



At this point, I am feeling a bit like the loveable doofus Clark Griswold who took his family on an arduous, humorous, and disaster filled cross-country sightseeing automobile trip from Chicago to Los Angeles. They suffered tremendously on this journey on a persistent quest to enjoy a planned day at the theme park Wally World, only to find it closed for maintenance.

Or perhaps I am more like Don Quixote, a self-appointed knight thinking he can right the wrongs of corporate Internet monopolies, but is actually just riding full tilt against corporate windmills.

But maybe, just maybe, I should be feeling like Ed Snowden discovering deep and dark dirty hidden secrets, like modified Spectrum test equipment reflecting inaccurate overly positive speed test results. Are some or all of Spectrum technician issued phones as well as some Spectrum technician issued laptops modified? Are these Java software applets or scripts and/or possibly the Chrome browser software modified at the server, client, or both? Why did the FSSMgr test my speed successfully, plugged into my router rather than their touchstone, which has always been at the modem? Why was he so sure he could get the provisioned speed with his phone and laptop?

Why can't 11 of my devices (2 phones, 2 tablets, 3 laptops, 4 desktops) consistently achieve provisioned speeds even at test sites within 100 miles of me? Why couldn't 4 of their devices (3 laptops/1phone) achieve it? Yet there are 5 of their devices that could in fact consistently obtain provisioned speed (4 phones/1 laptop? Inquiring minds want to know.

No call as promised today, just crickets. Are they still plotting my demise?

Got a call from Spectrum Customer Retention today. They offered me a discounted rate off their standard service rate (not the higher Ultra rate) for 12 months and then a discounted rate going forward for three years. They also wiped my account balance to zero. This is a positive note on the billing end. Now what is going to happen on the technical provisioning end remains to be seen.

Got an email from the FSSRMgr questioning the source of the test data that I sent him previously. He made no mention of the missed phone call, (these people just do not talk to each other) and the test data source was clearly identified in what I sent him, so I sent it to him again. Stalling or busy?

Got a call from the FSSRMgr late in the day and he indicated that he had intervened with Customer Retention and was following up to see if they had contacted me. I said thanks and that they had made me a fair offer, which I accepted. He also said that he has been very busy but has been reviewing the materials I have sent. The VP is traveling but will try to call me in the next couple of days.

Got a call from the VP; the theme of the call was what the "End User Agreement" says. No promised speed to the Internet, just a vague promise of a connection to any location up to 70% of 400Mbps. I questioned the integrity of their test site; she proclaimed the virtue of the entire corporation, despite the lawsuits, "F" ratings in customer service, and the FCC basically saying that they did not trust their self-reported coverage and speeds. In the end, I said that we would have to agree to disagree.

But I guess for now that whole Cable TV service mentality will continue to prevail at Charter/Spectrum. It appears as if some FCC/FTC/State Attorney's General intervention will be required here to mend this potential monopoly behavior and alleged fraud.

So this will be my final letter Dear Spectrum. I will allow the FCC, FTC, and the Wisconsin DATCP and perhaps the Wisconsin Attorney General to take this issue from here.

From: Rep.Sortwell [mailto: Rep.Sortwell@legis.wisconsin.gov]
Sent: Thursday, April 01, 2021 12:39 PM
To: Lefty Insider <lefty@tcw.org>
Subject: RE: Spectrum Internet network problems
Hello Lefty,
Thank you for reaching out to our office regarding your unfortunate circumstance. Given the nature of your inquiry, I referred your email to Legislative Council for more insight. Below you will read the answer they provided for me. I logged your contact that way Rep. Sortwell is made aware of the issue. He will call or email in response to address your concerns on this matter. Thank you for your patience and please let me know if you've followed the procedure highlighted in the following response:
"I've read through the complaint and put together some information that may be helpful for following up with the constituent.
The constituent's email relates to an ongoing issue he is facing with broadband service provided by Charter. Despite ongoing back and forth with the company and various troubleshooting efforts, it appears that he is continuing to receive service at lower speeds than advertised.
The issue of customers experiencing slower broadband speeds than advertised appears quite common. This has, at times, resulted in enforcement action by various states. Notably, the New York Attorney General (AG) brought a civil enforcement action against Charter in 2017, alleging that the company "conducted a systematic scheme to defraud and mislead subscribers to its Internet service by promising to deliver Internet service that it knew it could not and would not deliver." **In 2018, Charter and the New York AG reached a settlement agreement. Among other things, the agreement provided $62.5 million in refunds to customers and required Charter to implement various marketing and business reforms**.
Based upon the constituent's complaint, it is possible that Charter may be engaged in deceptive advertising under s. 100.18, Stats. Given this, the constituent may wish to file a consumer complaint with DATCP. DATCP maintains a page specifically for filing complaints related to telecommunications, available here. Depending upon the nature of consumer complaints, DATCP could refer the issue to the state AG for enforcement.
In lieu of a referral from DATCP, the AG may also pursue enforcement action on its own, or in combination with other state Attorneys General. Notably, state AGs may bring *parens patriae* actions on behalf of their citizens, which are similar to class-action lawsuits. *Parens patriae* actions provide a way to aggregate many individuals' claims against a common defendant, within a single public lawsuit brought by the state. Many of the actions seek injunctive relief against a defendant, such as requiring them to cease and desist unfair trade practices. In addition, AGs may obtain civil penalties, which may include compensation for members of a class who were harmed by the defendant's actions.
While the constituent expresses an interest in antitrust regulation for Internet providers, it's important to note that the state may only pursue antitrust regulations when not preempted by federal law. There is generally extensive federal regulation of the telecommunications industry that may largely preempt state efforts to break up Internet providers. As such, enforcement of existing consumer protection laws is generally a more viable route for addressing consumer Internet issues."

I hope this information is helpful and please feel free to reach out if you have any additional questions that I can help address.
Best Regards, **Sulamita Barbiyeru,** Legislative Assistant
Rep. Shae Sortwell – 2nd Assembly District
8 West, State Capitol | 608-266-9870
Sulamita.Barbiyeru@legis.wisconsin.gov

CHAPTER 100
MARKETING; TRADE PRACTICES
https://docs.legis.wisconsin.gov/statutes/statutes/100/18

100.207 Telecommunications services.

(1) DEFINITION. In this section, “telecommunications service" has the meaning given in s. 196.01 (9m).

(2) ADVERTISING AND SALES REPRESENTATIONS. A person may not make in any manner any statement or representation with regard to the provision of telecommunications service, including the rates, terms or conditions for telecommunications service, which is false, misleading or deceptive, or which omits to state material information with respect to the provision of telecommunications service that is necessary to make the statement not false, misleading or deceptive.

(3) SALES PRACTICES.

(a) A person may not engage in negative option billing or negative enrollment of telecommunications services, including unbundled telecommunications services. A person may not bill a customer for any telecommunications service that the customer did not affirmatively order unless that service is required to be provided by law, the federal communications commission or the public service commission. A customer's failure to refuse a person's proposal to provide a telecommunications service is not an affirmative request for that telecommunications service.

(b) A person may not charge a customer for telecommunications service provided after the customer has canceled that telecommunications service.

(c) A person shall provide a customer who has ordered a telecommunications service through an oral solicitation with independent confirmation of the order within a reasonable time.

(4) COLLECTION PRACTICES.

(a) A person may not misrepresent that local exchange service may be disconnected for nonpayment of other telecommunications service.

(b) A person may not unreasonably refuse to provide a detailed listing of charges for telecommunications service upon the request of a customer.

(5) TERRITORIAL APPLICATION. Subsections (2) to (4) apply to any practice directed to any person in this state.

(6) REMEDIES AND PENALTIES.

(a)

1. If a person fails to comply with this section, any person or class of persons adversely affected by the failure to comply has a claim for appropriate relief, including damages, injunctive or declaratory relief, specific performance and rescission.

2. A person or class of persons entitled to relief under subd. 1. is also entitled to recover costs and disbursements.

(b)

1. The department of justice, after consulting with the department of agriculture, trade and consumer protection, or any district attorney upon informing the department of agriculture, trade and consumer protection, may commence an action in circuit court in the name of the state to restrain by temporary or permanent injunction any violation of this section. Injunctive relief may include an order directing telecommunications providers, as defined in s. 196.01 (8p), to discontinue telecommunications service provided to a person violating this section or ch. 196. Before entry of final judgment, the court may make such orders or judgments as may be necessary to restore to any person any pecuniary loss suffered because of the acts or practices involved in the action if proof of these acts or practices is submitted to the satisfaction of the court.

2. The department may exercise its authority under ss. 93.14 to 93.16 and 100.18 (11) (c) to administer this section. The department and the department of justice may subpoena persons and require the production of books and other documents, and the department of justice may request the department of

agriculture, trade and consumer protection to exercise its authority to aid in the investigation of alleged violations of this section.
(c) Any person who violates subs. (2) to (4) shall be required to forfeit not less than $25 nor more than $5,000 for each offense. Forfeitures under this paragraph shall be enforced by the department of justice, after consulting with the department of agriculture, trade and consumer protection, or, upon informing the department, by the district attorney of the county where the violation occurs.
(e) Subject to par. (em), the department shall promulgate rules under this section.
(em)
1. Before preparing any proposed rule under this section, the department shall form an advisory group to suggest recommendations regarding the content and scope of the proposed rule. The advisory group shall consist of one or more persons who may be affected by the proposed rule, a representative from the department of justice and a representative from the public service commission.
2. The department shall submit the recommendations under subd. 1., if any, to the legislature as part of the report required under s. 227.19 (2) and to the board of agriculture, trade and consumer protection.
(f) This section does not preempt the administration or enforcement of this chapter or ch. 133 or 196.Practices in violation of this section may also constitute unfair methods of competition or unfair trade practices under s. 100.20 (1) or (1t) or fraudulent representations under s. 100.18 (1) or violate ch. 133 or 196.
History: 1993 a. 496; 1995 a. 27.
Cross-reference: See also ch. ATCP 123, Wis. adm. code.
Application of the common law voluntary payment doctrine would undermine the manifest purposes of this section. The conflict between the statute's purpose and the common law defense leaves no doubt that the legislature intended that the common law defense should not be applied to bar claims under the statute. MBS-Certified Public Accountants, LLC v. Wisconsin Bell Inc., 2012 WI 15, 338 Wis. 2d 647, 809 N.W.2d 857, 08-1830.
Allegations that the defendants violated sub. (2) by billing in a false, misleading, or deceptive manner and by omitting information necessary to ensure that statements in the phone bills were not false, deceptive, or misleading stated a claim under sub. (2). Sub. (2) does not limit prohibited representations to those made directly to the party alleging the violation and does not limit prohibited representations to "advertisements" or "sales representations." MBS-Certified Public Accountants, LLC v. Wisconsin Bell Inc., 2013 WI App 14, 346 Wis. 2d 173, 828 N.W.2d 575, 08-1830.

100.208 Unfair trade practices in telecommunications.

(1) In this section, "telecommunications provider" has the meaning given in s. 196.01 (8p).
(2) The department shall notify the public service commission if any of the following conditions exists:
(a) A telecommunications provider has been found by a court to have violated any provision of this chapter or of a rule promulgated under s. 100.20 (2) (a).
(b) The department has issued an order under s. 100.20 (3) prohibiting a telecommunications provider from engaging in an unfair trade practice or method of competition.
History: 1993 a. 496; 1997 a. 229.

From: Reinke, Shawn K - DATCP [mailto:ShawnK.Reinke@wisconsin.gov]
Sent: Wednesday, April 14, 2021 12:09 PM
To: lefty@tcw.org
Subject: Charter Communications Inc. XXXXXX
Dear Lefty Insider,
Please see the attached letter regarding the complaint you filed with the Department of Agriculture, Trade and Consumer Protection. I have written to the business to try and assist you to find a solution to your complaint. I will advise you, in writing, of the disposition of your complaint once I have received and thoroughly reviewed the written response from the company.
Sincerely,
Shawn Reinke
Consumer Protection Investigator – Mediation Unit
Division of Trade and Consumer Protection
Wisconsin Department of Agriculture, Trade and Consumer Protection
Phone: (608) 224-4535
Work cell: (608) 866-0192
Fax: (608) 224-4677
shawnk.reinke@wisconsin.gov

Please complete this brief survey to help us improve our customer service. Thank you for your feedback!

From: egov-admin, CRM [mailto:noreply@wisconsin.gov]
Sent: Tuesday, April 13, 2021 4:14 PM
To: lefty@tcw.org
Subject: MyDATCP - Complaint Submitted CRM:0025790

Dear Lefty Insider,
Thank you for submitting a complaint with The Department of Agriculture, Trade and Consumer Protection. You can use the complaint PIN below to check the status of your complaint on the MyDATCP website. It can take up to 24 hours for a complaint to be available online.

Telecommunications Complaint
Complaint PIN:
Your Complaint
I have made a trilogy of complaints, with supporting documentation, which I have made via email and web form to Charter Communications/Spectrum as well as to the FCC as three separate consecutive consumer complaints over the past six weeks or so. The FCC ticket No's. are 4692199, 4692199, and 4703882 respectively. I have also recently filed a complaint with the FTC Technology Enforcement Division. I have been a Spectrum customer at this address for more than two years and recently upgraded to their new faster service February 25, 2021. I have not received the advertised speed service, which is the issue at hand here. My account number 8245 11 107 0007227 The Internet Ultra service as it is currently advertised and physically made available, is according to my recent comprehensive testing is in all actuality unavailable. As such, this service offering is fraudulent by its very nature in my view. Their marketing information indicates no qualifications or contingencies on me availing myself of this service and being able to receive the advertised Internet speed. https://www.spectrum.com/ultra This corporation continuing to charge customers for a service level they cannot achieve on an ongoing basis also represents a blatant fraud in my view. In addition the above advertisement makes a product performance reference to an FCC report, which in itself or appendices, does not appear to contain the information they indicate it does. So this is another example of what appears to be blatantly fraudulent marketing. In their totality, these complaints represent behavior by this corporation which in my view

are monopolistic and anti-competitive. This behavior misinforms and defrauds the public as well as misinforming potential competitors regarding Internet service availability in this geographic area. Please utilize your significant resources to investigate this issue.

****
MyDATCP Support

Wisconsin Department of Agriculture, Trade and Consumer Protection
2811 Agriculture Drive, P.O. Box 8911
Madison, Wisconsin 53708-8911, (608) 224-5012
****
Please do not reply to this message. Mail sent to this address will not be answered.

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Monday, May 10, 2021 11:07 AM
To: 'Romens, Aaron J - DATCP' <Aaron.romens@wisconsin.gov>
Subject: RE: Charter Communications Inc. 116518

Hello Aaron,
Can you be more specific regarding the investigators who continue to look at this?
Has or will this issue be referred to the AG's office?
Will Charter be asked to specifically refute the data that I have collected?
Will Charter be asked to provide their own data which supports their position that everything is fine?

"In our process, we mediate disputes - finding resolutions when they are available –"
I would think that your mission would be to advocate for and protect consumers, hence the name Consumer Protection.

"If you feel like your specific case against Charter is one you would like to pursue, you have the option of hiring an attorney and going through the court process."
Actually as you probably should probably already know, the User Agreement for all the major Internet providers preclude this option.

"If you have a response you would like to send to Charter, Shawn can send that response to them."
I have been sending letters to Charter for two months already, so that would seem to be pointless unless Charter is required to respond in a more comprehensive data-driven manner.

Thank you for your attention to and efforts on my and all Wisconsin Charter customers behalf,
Lefty

Executive Summary

(Seems appropriate after 20k words across 4 letters over 4 months on this saga)

- Late February I upgraded to Ultra speed and did not get a noticeable speed bump from the original 100Mbps provisioning.
- Called Tech Support and they rolled a truck, replaced the modem, and said it was fine but my router was stuck. Still did not get it. Hitron modem.
- Called Tech Support again and they rolled a truck and said it was fine but my router was stuck. Still did not get it.
- Replaced my 5 year old $300 router with a new $350 one.
- Still did not get it so I called Tech Support again, and they rolled a truck and found out it was not fine, worked on some cable issues, had a supervisor re-provision over the phone and it improved but not enough.
- They rolled a truck FSS did some testing, was verbally abusive, changed the modem, but found out it was not fine. Ubee modem.
- They rolled two trucks a tech and a different FSS did some testing, was a nice guy, changed the modem, but found out it was not fine. Testing with a laptop not good at my PED or in neighborhood either. Technicolor modem.
- They rolled two more trucks, a different FFS and FFSM sup Mgr., did some testing, were nice guys, but found out it was not fine except with their one laptop and phone on one test site. They pronounced it to be OK based on that. I still did not get it. I did have progress in a speed increase from about 150Mbps to 200-250Mbps during this time.
- I wrote and emailed the first if four long letters to five of Charter Corp officers. Included lyrics for my first original song "Got the Spectrum Blues" with lyrics rhyming Spectrum to Rectum. The song blamed Charter/Spectrum and "hops" as the problem but also blamed LiMu Emu, Doug, Kevin Bacon and others. I also included a complete .mp3 audio recording file of these lyrics with BB King like guitar riffs and Chuck Berry like Honky Tonk piano licks.
- I produced a comprehensive testing spreadsheet of nine of my computers. Clearly showing I still did not get what I was paying for.
- Spoke multiple more times on the phone, sent multiple emails to FSSRM
- Wrote the second letter providing more data and an-invented corporate meeting scenario to explain why I suspected I could not get the advertised speed.
- Wrote the third letter to provide more info, my contact with the FCC and FTC, and to whine about my encounter with your clueless Spectrum billing department.
- Now you are reading the fourth and perhaps final letter providing some additional data, some speculation and accusations, and hopefully a conclusion to this saga.
- Spectrum Customer Retention made me a reasonable concession offer on monthly pricing. An admission of guilt, fault, or reality?

Over the course of these months with words, graphs, charts, test data, and song lyrics proving my case, I got them to improve my service from 100Mbps to 200Mbps on their Charter/SPECTRUMNET. I am still in the 50-100Mbps range getting to a Chicago backbone Internet connection.

They ended up discounting their 400Mbps rate to me for three years to the 100Mbps rate, which I see as an admission of guilt. This is the best they can do given their current cobbled together network architecture.

Charter
COMMUNICATIONS

May 2, 2021

SENT VIA ELECTRONIC MAIL
Ms. Shawn Reinke
Consumer Protection Investigator
Department of Agriculture, Trade and Consumer Protection
State of Wisconsin
Post Office Box 8911
Madison, Wisconsin 53708

RE: Mr.
File Number: 116518

Dear Ms. Reinke:

Charter Communications, Inc. ("Charter) hereby submits its response in the above-referenced matter.

Our Field Operations Team has completed extensive monitoring of Mr. internet service and we have confirmed he is receiving internet download speeds of 400 Mbps. A test modem confirmed that the consumer was receiving consistent download speeds of 400 Mbps. There are many different factors that can impact a customer's internet speed at any given moment, but we have confirmed that his internet service is operating at the expected level. As such, it is our position that we are not in violation of Wis. Admin. Code § ATCP 123.10(4).

Charter offers different promotional rates to different groups of customers, including promotional discounts only for new customers. All customers are informed that standard rates apply once a promotional discount expires. We have confirmed that Mr. has been accurately billed. Nevertheless, we have applied a new limited time promotional discount to his account. Furthermore, a $49.99 service call trip fee from March 3, 2021, was credited to his account.

Please do not hesitate to contact us with any further questions.

Respectfully submitted,
/s/
William C. Wesselman
Sr. Director, Law – Regulatory

Charter
COMMUNICATIONS

May 3, 2021

SUBMITTED VIA FCC WEB PORTAL
Consumer Inquiries and Complaints Division
FCC – Consumer & Governmental Affairs Bureau
45 L Street NE
Washington, DC 20554

RE: Notice of Informal Complaint
Complainant: Mr.
FCC Serve Ticket Number: 4692199
Original Ticket Serve Date: April 8, 2021

Dear Sir/Madam:

Charter Communications, Inc. ("Charter") hereby submits its response in the above-referenced matter.

Mr. Pitsch has stated he is not receiving the correct internet speeds for his tier of service. Our Field Operations Team has completed extensive monitoring of Mr. internet service and they have verified he is receiving internet speeds consistent with his subscribed level of service. A test modem confirmed that the consumer was receiving consistent download speeds of 400 Mbps. There are many different factors that can impact a customer's internet speed at any given moment, but we have confirmed that his internet service is operating at the expected level.

Charter offers different promotional rates to different groups of customers, including promotional discounts only for new customers. All customers are informed that standard rates apply once a promotional discount expires. We have confirmed that Mr. has been accurately billed. Nevertheless, we have applied a new limited time promotional discount to his account. Standard rates will apply once this promotional discount expires.

Please do not hesitate to contact us if you have any questions.

Respectfully submitted
/s/
William C. Wesselman
Sr. Director, Law - Regulatory

Charter
COMMUNICATIONS

June 1, 2021

SUBMITTED VIA FCC WEB PORTAL
Consumer Inquiries and Complaints Division
FCC – Consumer & Governmental Affairs Bureau
45 L Street NE
Washington, DC 20554

RE:	Notice of Informal Complaint	
	Complainant:	Mr.
	FCC Serve Ticket Number:	4692199
	Rebuttal Ticket Serve Date:	May 17, 2021

Dear Sir/Madam:

Charter Communications, Inc. ("Charter") hereby submits its rebuttal response in the above-referenced matter.

We have reviewed Mr. Pitsch's additional comments submitted in this ticket, and we reaffirm our initial response. We have confirmed on three different service calls that Mr. is receiving the proper speeds to his internet modem, and no repairs are necessary. The extensive testing on April 1 and April 2, 2021, confirmed that he was receiving the proper speeds for his level of service.

In addition, Mr. has been accurately billed and has the best rate available for his current level of service.

Please do not hesitate to contact us if you have any questions.

Respectfully submitted
/s/
William C. Wesselman
Sr. Director, Law - Regulatory

Another Word or Two

I have recently been sharing versions of this simple message with local, state, and federal leaders. I believe that this message applies to the future of your corporation as well. So I will leave you with these thoughts to ponder.

Politicians,

Now we must focus because we as a State do not want to miss out on the next wave of funding coming soon. $100 billion for rural broadband.

The restrictive laws you have put into place banning or restricting municipal and nonprofit Internet providers jeopardizes this funding I believe. It certainly contradicts the pending broadband funding priorities coming from the Federal administration and eventually I believe from the FCC.

Coddling the incumbent monopoly providers who have promised and yet not delivered fiber optic cabling for the past thirty years have proven that the *invisible hand of the free market* does not work here, (if it actually works anywhere) despite 400 billion dollars plus of tax subsidies/grants/corporate welfare. http://teletruth.org/

My previous emails to you also reveal that these existing incumbent monopolies, i.e. Comcast, Charter/Spectrum, AT&T, do not now even consistently deliver the slower speeds, which they advertise and charge money for. I have filed complaints regarding this situation with the FCC, FTC, and WI DATCP. A closer inspection of these practices may well reveal fraudulent activities and/or monopoly behavior.

Meanwhile, we in rural Wisconsin need you to "get with the program" to promote the educational and employment opportunities, as well as the economic development that *real* rural broadband will bring. I do not mean the phony 25Mbps that the FCC calls broadband. I mean 1Gbps symmetrical fiber optic connections from the home or business directly to the Internet backbone.

If you think about this for a bit, this idea is not unlike the Great Lakes and Mississippi River ports, the railroad systems, the town, county, state, and Interstate highway systems, rural electrification, RFD postal service, and the public water and sewer systems of the past. These systems helped build this state. Economic development follows the infrastructure. Chickens lay eggs. It is a simple yet basic historical lesson.

PS. **Charter Must Pay $19 Million For Tricking Customers Into Switching ISPs (arstechnica.com)**

A judge has ordered Charter Communications to pay $19.2 million to Windstream for lying to customers in order to trick them into switching from Windstream to Charter's Spectrum Internet service. Charter also faces a $5,279 penalty for shutting off service to hundreds of Windstream's resale customers. Ars Technica reports: When Windstream filed for bankruptcy in early 2019, Charter began a "literally false and intentionally misleading advertising campaign intended to create the impression, using mailings designed to seem as if they were coming from the Debtors [Windstream], that the Debtors were going out of business," said an order issued Thursday by Judge Robert Drain of US Bankruptcy Court for the Southern District of New York. Charter's goal with the mailings "was to induce the Debtors' customers to terminate their contracts and switch to Charter by sending them literally false and intentionally misleading information about the Debtors' bankruptcy cases and financial wherewithal," the ruling said. Charter premised its ad campaign "on false assertions regarding the Debtors' bankruptcy cases," the ruling said.

"We are gratified that Judge Drain's ruling means Charter will have to pay a significant price for its egregious false advertising," Windstream General Counsel Kristi Moody said. "Charter knew full well what it was doing when it embarked on a dishonest scare-tactic campaign to lure away our customers. At Windstream, we will always aggressively defend ourselves and our customers against predatory schemes and meritless allegations."

Well, is that not just special!, says me.

PPS.

> *Federal Communications Commission member Michael O'Rielly argued that "Internet access is not a necessity or human right" and called this one of the most important "principles for regulators to consider as it relates to the Internet and our broadband economy."*

https://arstechnica.com/information-technology/2015/06/Internet-access-not-a-necessity-or-human-right-says-fcc-republican/?itm_source=parsely-api

I guess that depends are if you are looking at this from a 1% view or a 99% view. Are education, employment, housing, and inclusion in a participatory democracy human rights? Perhaps not, but maybe these rights are covered by that whole Life, Liberty, and the Pursuit of Happiness clause?

PPPS.

FCC Urges Americans To Run Internet Speed App To Counter Broadband Data Fudging (theregister.com)

> *The FCC is encouraging netizens to use its Internet speed mobile app in an effort to finally get accurate broadband data across the United States. The Register reports: In an announcement on Monday, the telecoms regulator noted that "the app provides a way for consumers to test the performance of their mobile and in-home broadband networks" and "provides the test results to the FCC." It stops far short of saying that the data will be used to make policy decisions, however, saying only that the figures gathered, "will help to inform the FCC's efforts to collect more accurate and granular broadband deployment data."*
>
> *The public push does not mean that things are going to get better soon. Big Cable has aggressively -- and successfully -- argued in the past that data provided by users over an app is not sufficiently robust to form the basis of governmental decisions. And so the FCC will have to use the results as a way to push for change rather than use the data to make direct decisions. Everybody, including numerous states, cities, congress folk and the GAO**, know that the official FCC data provided by ISPs is not worth the paper it is written on**. But broader usage of the app should expose just how inaccurate official figures are, which should in turn provide enough impetus for change. The bigger question is whether enough progress is made in the next four years to make any difference.*

PPPPS. (If there even is such a thing)

Striking Charter Workers Build ISP Where 'Profits Are Returned To Users' (arstechnica.com)

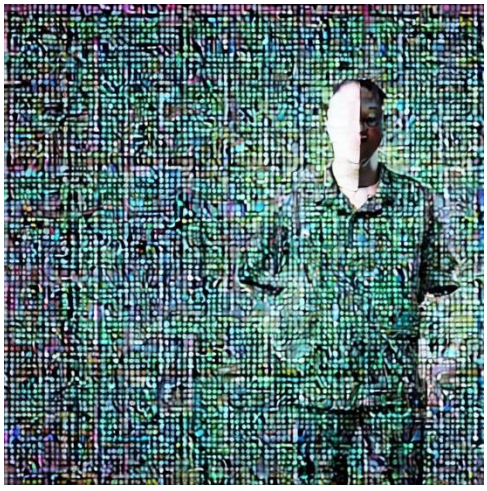
> *Charter Communications employees who have been on strike since 2017 are building an Internet service provider in New York City called "People's Choice." "People's Choice Communications is an employee-owned social enterprise launched by members of IBEW Local #3 to bridge the digital divide and help our neighbors get connected to the Internet during the COVID-19 pandemic," the ISP's website says. "We are the workers who built a large part of New York City's Internet infrastructure in the first place. We built out [Charter] Spectrum's cable system, until in 2017, the company pushed us out on strike by taking away our healthcare, retirement, and other benefits. It's now the longest strike in US history."*
>
> *So far, People's Choice says it has completed rooftop antenna installations at two schools in the Bronx and installed "hardline connections to wireless access points connecting 121 units" at housing for survivors of domestic violence who have disabilities. A Gizmodo article said the system is equipped to offer minimum speeds of 25Mbps downstream and 3Mbps upstream, meeting a broadband standard that has been used by the Federal Communications Commission since 2015. "We have a big portion of most of the Bronx covered with our antenna," IBEW Local #3 steward Troy Walcott told Gizmodo. "Now we have to go building by building to let people know we're out there and start turning them on." "A few dozen Spectrum strikers have been actively involved in the installations, but Walcott expects that at least one hundred workers are waiting in the wings for the project to scale up," the Gizmodo article said. "We work in affordable housing, supportive housing, co-op housing, NYCHA [NYC Housing*

Authority], homeless shelters, and regular old apartment complexes," the webpage notes. You can fill out this form if you are interested in bringing broadband to your building.
"After we build out a network in your building, it transfers to cooperative ownership, so profits are returned to users," the People's Choice website says. "We are able to provide high-speed service in most cases for $10-$20/month. No more cable company ripping you off, and as an owner, you have a vote in policies like data privacy."

It seems to me like Charter is in the news a lot lately and none if it seems to be too good.

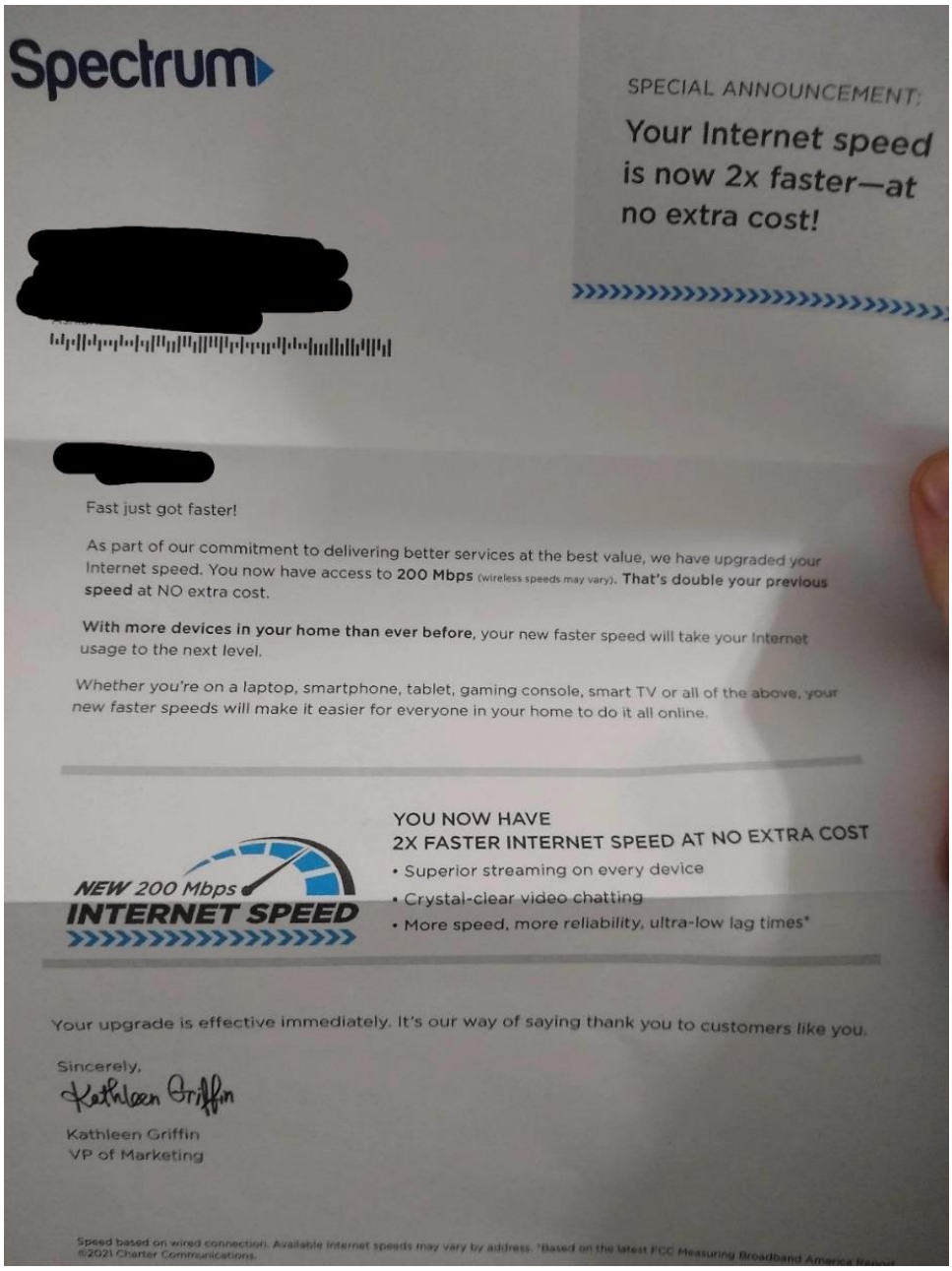
And finally…
"I know who you are, I know what you want. I can tell you that I do not have enough money for you... but what I do have are a very particular set of skills. Skills I have acquired over a very long career. Skills that make me a nightmare for corporations like you. I will find out about you, I will test your speed and latency, and I will report your shortcomings." (*A paraphrase of Liam Neeson as Bryan Mills in the movie Taken)*

Meanwhile I will be hiding out among the packets in Cyberspace camo.



BREAKING NEWS

I guess some lucky souls are getting this letter. This could have prevented my whole 4-month ordeal. Northeast Wisconsin is noticeably absent any of these letters.



Spectrum

SPECIAL ANNOUNCEMENT:

Your Internet speed is now 2x faster—at no extra cost!

[redacted]

[redacted]

Fast just got faster!

As part of our commitment to delivering better services at the best value, we have upgraded your Internet speed. You now have access to **200 Mbps** (wireless speeds may vary). **That's double your previous speed** at NO extra cost.

With more devices in your home than ever before, your new faster speed will take your Internet usage to the next level.

Whether you're on a laptop, smartphone, tablet, gaming console, smart TV or all of the above, your new faster speeds will make it easier for everyone in your home to do it all online.

NEW 200 Mbps INTERNET SPEED

YOU NOW HAVE
2X FASTER INTERNET SPEED AT NO EXTRA COST

- Superior streaming on every device
- Crystal-clear video chatting
- More speed, more reliability, ultra-low lag times*

Your upgrade is effective immediately. It's our way of saying thank you to customers like you.

Sincerely,

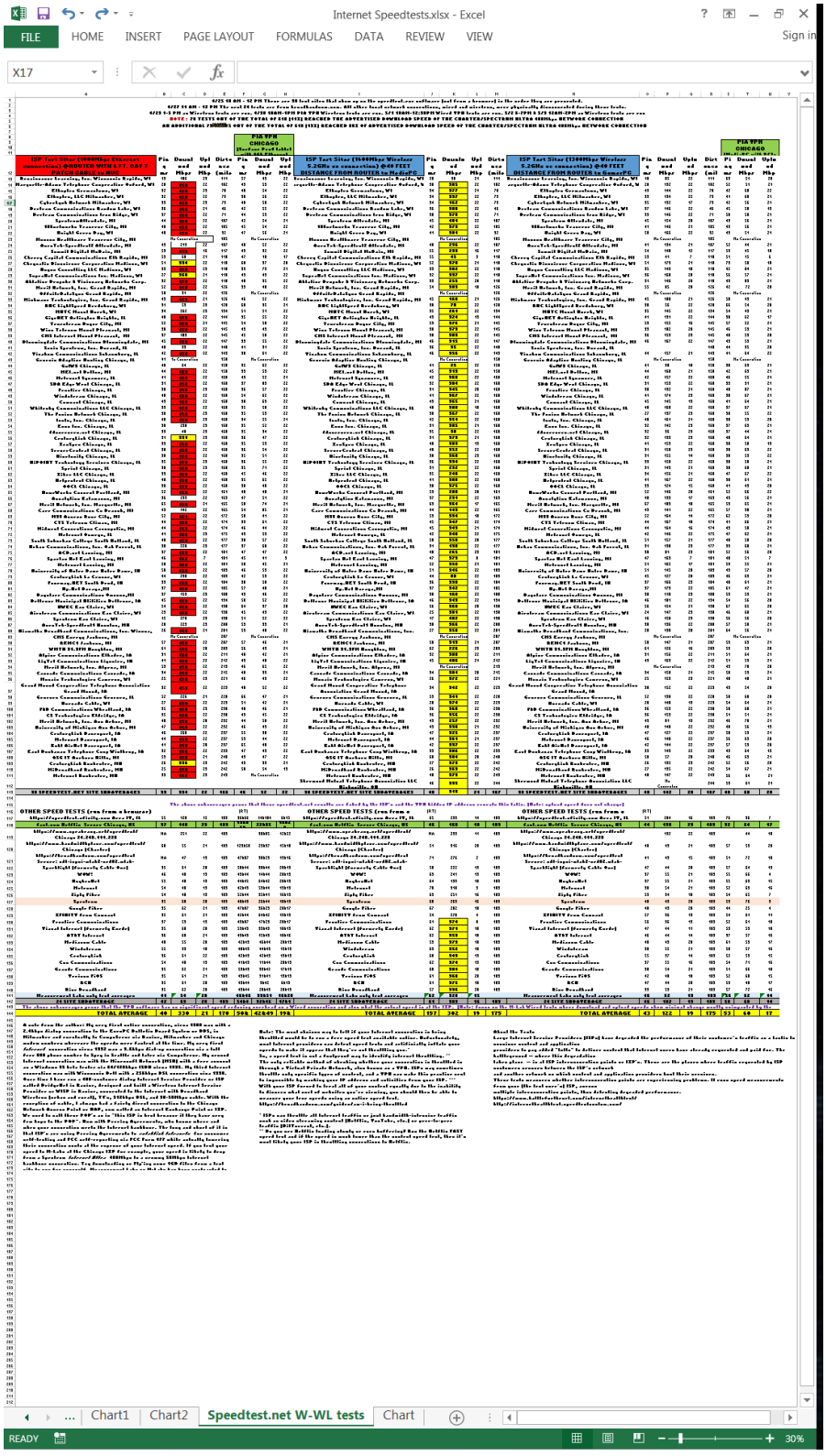
Kathleen Griffin

Kathleen Griffin
VP of Marketing

Speed based on wired connection. Available Internet speeds may vary by address. *Based on the latest FCC Measuring Broadband America Report
©2021 Charter Communications.

Ok Charter/Spectrum it is Time to Cut the Shit!

(The accompanying Excel spreadsheet shows that only 70 Tests Out Of 600 (12%) reach the Advertised Speed of the Charter/Spectrum Internet Ultra 400Mbps Network Connection)



Adobe Acrobat Document

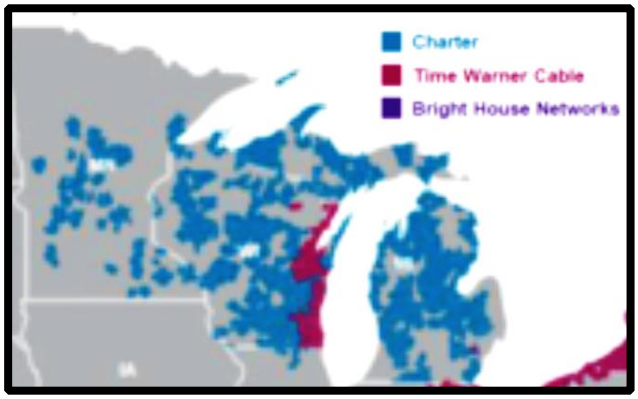
http://www.tcw.org/Internet Speedtests grid.pdf

Let us begin here anew with a quote from a well-informed Internet Service Provider or ISP, who has been in business for decades shall we? When questioned and who, when shown a copy of my tracert to Spectrum.com said the following:

> *"Spectrum currently has two networks in Wisconsin. The old legacy Time Warner Cable, or TWC network and then they have a new Charter/Spectrum network for all of the NEW areas in Wisconsin they have built out.* ***From your geographical location, the network takes your traffic the long way around the SPECTRUMNET network and through the Charter network to get you to the real Internet."***

As you can see, it can take 14 hops to get there.

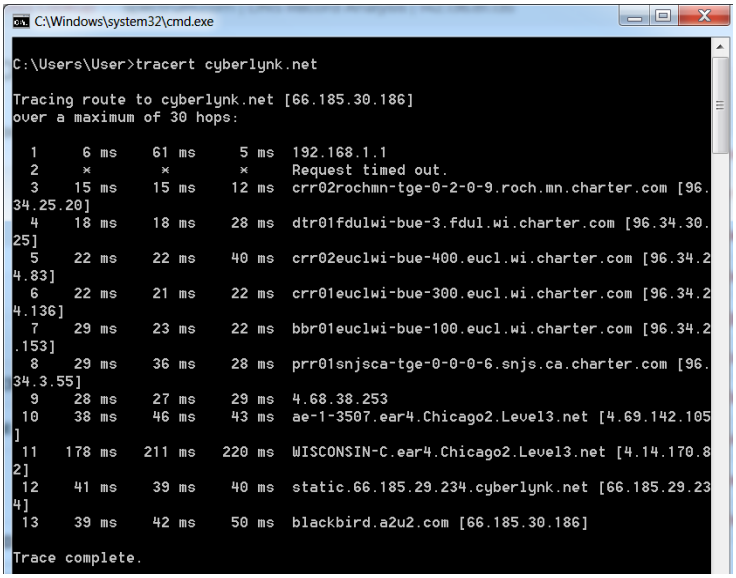
Trace route to Spectrum.com 142.136.168.58
96.34.23.212 Fitchburg Wisconsin
96.34.30.25 Wausau Wisconsin
96.34.24.83 Eau Claire Wisconsin
96.34.24.136 Eau Claire Wisconsin
96.34.2.153 Riverside California
96.34.0.7 Ashburn Virginia
96.34.0.9 Ashburn Virginia
66.109.1.18 Chicago Illinois
66.109.6.21 Chicago Heights Illinois
66.109.10.99 San Jose California
66.109.10.93 San Jose California
66.109.6.245 Atlanta Georgia
165.237.51.245 Greenwood Village Colorado
165.237.4.131 San Jose California



Note: Geo locations from https://www.iplocation.net/ip-lookup

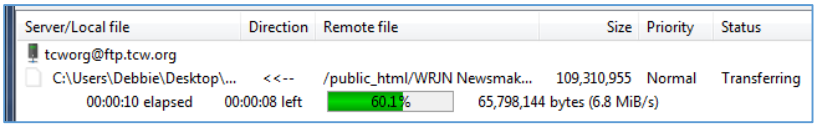
https://www.computerworld.com/article/2926226/charter-time-warner-deal-would-get-tough-regulatory-scrutiny.html

A tracert from my computers to my hosted website for example, goes something like from me to Fitchburg, Eau Claire, Wausau, LA, Dallas, Chicago, and then finally to Franklin. This appears to also prove out the above quote.



Or how about another quote from another ISP?

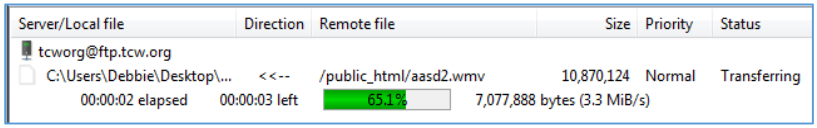
"We have no good way of knowing if traffic is being throttled somewhere or by who. All we have to go off of is from my desk the speeds are 600-900Mbps for FTP transfers and we are not hearing complaints from other customers."



FileZilla 57Mbps

Or maybe one more quote:

"As for the FTP speeds, there is not much we can do on the uploads/downloads from your location. If there was a problem with the server or our datacenter network or with any of our five Internet connections, we would have thousands of customers complaining about speed issues."



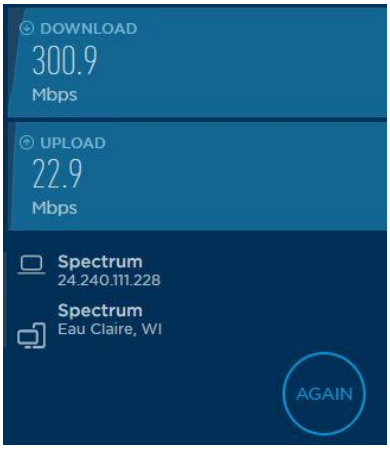
FileZilla 28Mbps

With regard to https connections:

On a wired 1000Mbps Ethernet connection, if you use a misleading speed test and do not venture too far (100 miles) from home:

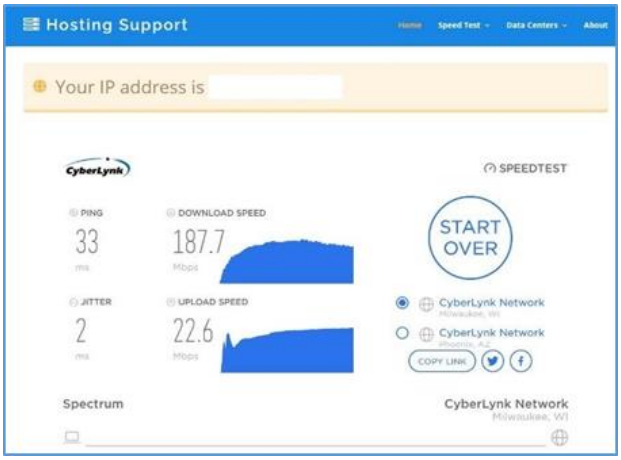
You will get something like this:

If your packets venture out towards the edge (200 miles) of the SPECTRUMNET:



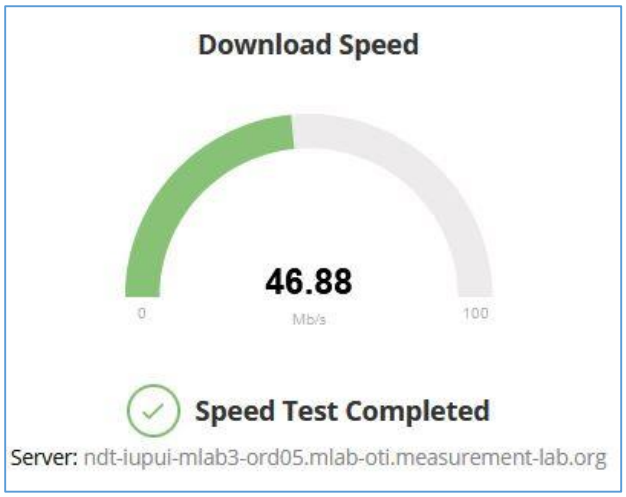
You start to lose your speed.

Then if you ping pong around the CHARTERNET/SPECTRUMNET to the actual Internet *going around the horn* as shown in the tracert, and then do a speed test at my Franklin website provider, hostingsupport.io, it shows:



This is gives you more of a "real world" Internet speed test.

Then when your packets were passing through Chicago, and they wanted to stop and test Charter there, you will get something like this:



https://broadbandnow.com/Charter-Communications-speed-test

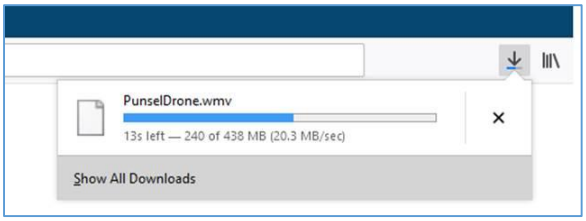
So in the real world of computer Internet users, you may be working with about ten percent of Spectrum's advertised speed. I could not care less about what the Millennial's are doing with their *dumb terminal* phones. (Cellular Newton's)

If you recall this, all started for me with an upgrade to what I thought (and you promised) was a faster service, because my streaming video would not consistently provide HD quality, and I wanted to use a VPN and Tor to research and write a book. It continued with me buying a new router to replace what the technicians called the "stuck" one that I had. Come to find out that neither the service upgrade nor the router improved my speed. It continued with me pounding Spectrum with emails, stories, lyrics, a song, and data for four months, five site visits by 8 technicians, who left more BS behind in my house than a herd of Holsteins. It ended up at the VP level and with a conversation with a Colorado Network Engineer.

So your VP offers platitudes like they only say "UP TO" 400Mbps speed, and that I should connect to their modem rather than my router for testing, which is where we started with all of this almost many months ago. Yet you use this same router to pronounce your system OK.

Your network engineer can only offer even more platitudes like making sure no one else in our two person senior citizen house is using the Internet while I am testing or downloading. Or offering that if I am getting 160Mbps to my website (less than half of advertised) it is truly remarkable considering that he and I started at 2400bps thirty years ago. I personally think that what really ***is*** remarkable and more useful is my computers going from a 4 MHz to a 4 GHz processor in that same time frame. This network engineer also tried to distract and appease me by letting me know that his own Comcast 600Mbps service tests out at around 300Mbps at most and he cannot reliably play streaming Disney movies for his kids, which need a whopping 6Mbps, during weekends and evenings.

So the message given here is be grateful for what you have, it could be worse, and we will cut your monthly price in half to reflect the half our promise you are actually getting. This pretty much confirms that my data is correct.



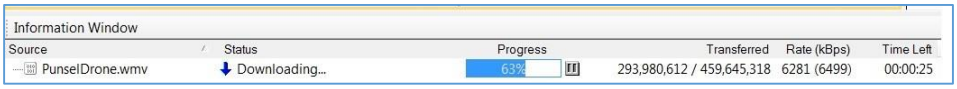
Firefox 88.0 HTTPS 162.4Mbps

For the sake of fairness, here are some examples of some contradictory quotes from other ISP's:

Answer One: "you're not rate limited etc….any speed issues are on your end (sorry)"

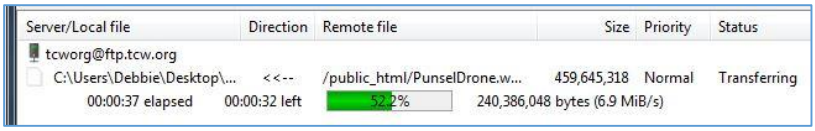
Answer Two: "We have software on the hosting servers so one customer cannot use up all of the resources and hurt other customers."

Answer One: "I'm sorry, but you're just not going to see the same speeds from the web server that you'll see from the speed test. The web server is not optimized for downloading files of the size of your movie as that's not the typical use case for clients." "If there was a problem with the server or our network we would have thousands of customers complaining about speed issues."



WS_FTP 6.5Mbps

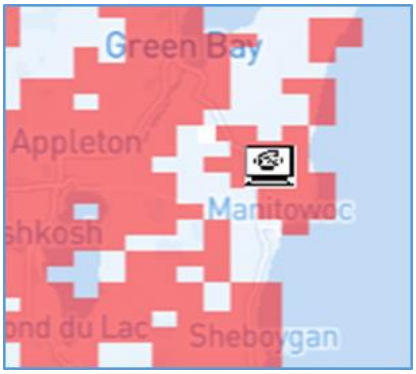
Answer Two: "All we have to go off of is from my desk the speeds are 600-900Mbps for FTP uploads/downloads and we are not hearing complaints from other customers."



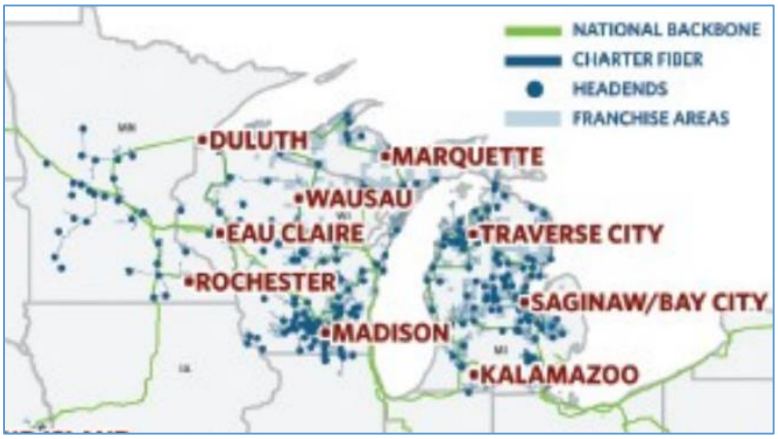
FTP FileZilla 58Mbps

Your VP says that Spectrum cannot control my speed ON the Internet, and I agree, but you CAN via your routing and peering arrangements control my speed TO the Internet.

After all, I am not paying you for super-fast access 100 miles or even 200 miles away. I have no business or reasons to go to those places.



What I am paying for is fast access to my website 100 miles south to my Franklin/Milwaukee website and TO the Global Internet 200 miles south at the Chicago IXP, neither of which I currently have. Nor do I have direct access 100 miles south to the Milwaukee IXP, 150 miles southwest to the Madison IXP, or 300 miles northwest to the Minneapolis IXP.



I appear to be on a bit of a red low bandwidth island here, and I am not sure where the portage to the backbone is.

https://broadbandnow.com/Charter-Communications/telecomramblings.com

Internet Transit

Since the Internet is a network of networks, to be connected to the Internet, any entity must attach itself to another entity that is already connected to the Internet. This is usually accomplished by purchasing a service called "Internet Transit." Internet Transit is the business relationship whereby an Internet Service Provider or ISP, sells access to the global Internet. Internet Transit is often a large component of the cost of operating an Internet service.

Think of the vast U.S. interconnected highway systems of Interstate, State, County, and Town roads that connect cities large and small across the United States. That complexity is similar to the information highway that makes up the backbone of the Internet (Interstate), except that instead of the government owning all of it, many entities do and are left to sort out all of the rules of these connections. These entities are called Internet service providers or ISP's.

This type of multi-faceted shared system means negotiation is key. These ISPs organize themselves into Tiers. Each tier corresponds to the level of IP Network Access.

The U.S. Internet Region Tier 1 ISPs (Internet backbone)

1. AT&T
2. Verizon
3. Sprint (Softbank Broadband)
4. Century Link (Qwest)
5. Level 3 (Global Crossing)
6. NTT/Verio

Upper Midwest six Tier 1 ISP's (1 of 8 US interconnect regions)

A Tier 2 network is an Internet service provider that engages in the practice of peering with other networks, but which also purchases IP transit to reach some portion of the Internet. Tier 2 providers are the most common Internet service providers, as it is much easier to purchase transit from a Tier 1 network than to peer with them and attempt to become a Tier 1 carrier.

Tier-2 Carriers include:

- Comcast
- Cox Communications
- CTS Telecom
- Charter Communications/Spectrum (also a Tier 3)

Tier 3 is used to describe networks who solely purchase IP transit from other networks to reach the Internet.

Wisconsin Tier-3 carriers include:

- CyberLynk
- Frontier Communications DSL/fiber (leased Verizon and AT&T lines)
- TDS Telecom DSL/fiber (leased AT&T lines)
- HierComm Networks, LLC (wireless broadband)
- Netwurx (wireless broadband)

When you hear talk about net neutrality, this is why. Tier-3 carriers are usually last mile providers, meaning they connect consumers to the Internet without a network of their own, servicing only the connection leading into your home or office. Content providers have little control over this part. As such, tier 3 ISP networks can be artificial congested, poorly maintained, or throttled.

Peering Agreements

Peering provides a more direct traffic path between the parties while reducing the load on these expensive transit services. Since peering is a nontransitive relationship, Internet Peering is not a perfect substitute for Internet Transit.

Internet Transit is a service that provides access to the global Internet, while Internet Peering simply provides a more direct path for a subset of the traffic.

Internet Peering is typically settlement-free, with each side deriving about the same value from the reciprocal arrangement. If either party perceives that the benefit derived from peering is asymmetric, one party or the other may deny peering or suggest an alternative paid arrangement.

If the cost of exchanging traffic in peering relationships is less than the cost of sending that traffic through a transit service, then peering can be a financially rational decision. Peering makes sense when it is cheaper to send traffic to peers than though a transit provider. *This is also, where the quality of the service provided (QOS) could degrade due to cost concerns and prioritization of convenience over performance.*

Transit usually provides a more circuitous path than peering – a path through potentially many networks. It is not uncommon to find more than 30 router hops from eyeballs to content.

However, the primary motivation for these ISPs is to own the home market and not make it easy for other ISP's to build in to their home market and compete with them.

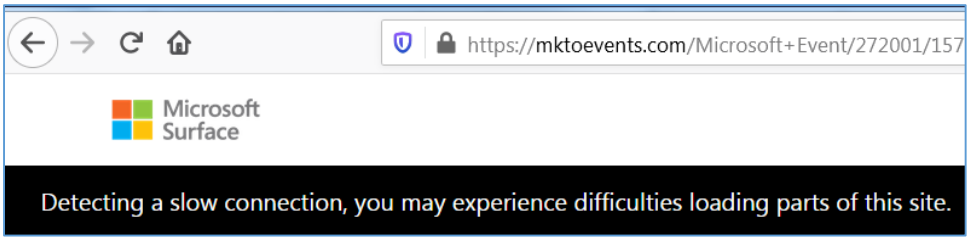
The cost of peering at an IXP usually involves: Transport fees (unmetered) for getting the traffic to the exchange point (IXP), Colocation fees, Equipment expenses plus the Peering port fees on the exchange point shared fabric.

References: *The 2014 Internet Peering Playbook: Connecting to the Core of the Internet © 2014 by William B. Norton and published by DrPeering Press*

https://www.ctstelecom.com/the-three-tiers-of-isps-what-they-mean-why-theyre-important/

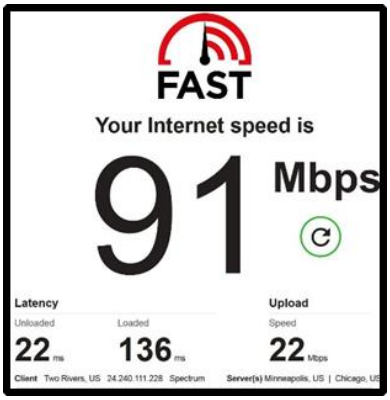
https://drpeering.net/FAQ/Who-are-the-Tier-1-ISPs.php

This is not something I like to see too often, but this is my real world.



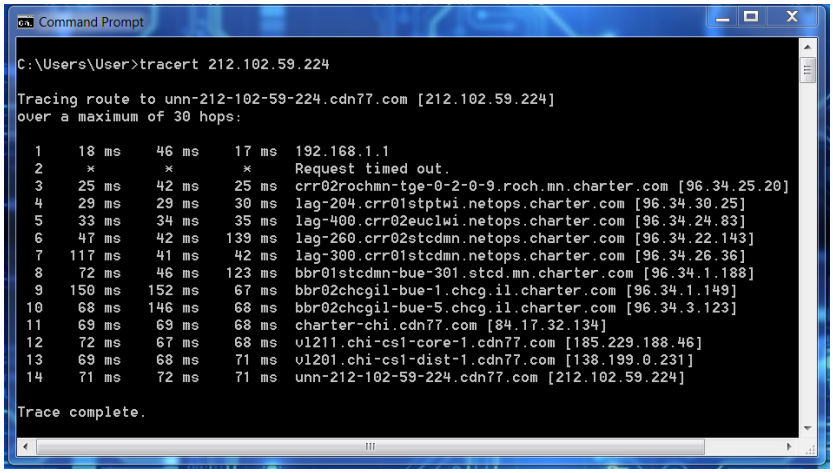
I continue to get video and audio stuttering on Amazon Prime Video that uses 15.2Mbps in Best video quality mode.

This from Netflix:



I just want Spectrum to get me from their Tier 2/3 SPECTRUMNET to the Intestate/Internet backbone where the speed limit of my vehicle/packets is 55Mph or in this case 400Mbps. Imagine our highway system being setup where the further you get from home the lower the speed limit drops. This is what I, and an unknown number of NE Wisconsin Spectrum customers have now.

If I connect to one of the SPECTRUMNET *beauty contest* speed test sites, I can get a speed reading of 459Mbps. If I then turn on a software VPN and go to the same site via a VPN server residing on the **Chicago Internet backbone***, I get a reading of 129Mbps. This is speed drop is not fully a result of the VPN encryption overhead, nor the speed or bandwidth of the VPN server, but is mostly related (see spreadsheet data) to connecting to this test site via the Internet rather than the SPECTRUMNET.



** DataCamp Limited, in Chicago with a 30Tbps plus Global Network.*

I do not know exactly how or where I get to the Internet backbone, so I cannot do a speed test to that point.

What this means in real life terms is that I get poor download and upload speeds to my web hosting site, to the Internet in general, and I cannot decently run a VPN. This is because I do not really have an Internet backbone connection, but rather a SPECTRUMNET connection that eventually meanders around and connects to the Internet somewhere and somehow. This also means me not being able to consistently stream HD movies from Netflix and Prime Video.

So in the end, Internet access is not about Spectrum Internet Ultra's speed to a *beauty contest* test site. It is really about how much of the Internet bandwidth Spectrum will allow me to have access to. They are the gatekeepers who determine how much bandwidth (and perhaps content) of this public utility, I am allowed to access. This seems to be directly at odds with the way our public utilities governed by the Wisconsin Public Service Commission or PSC generally operate.

PS. Oh, and now you are helping to break it…for your profits.

> *By David McCabe The New York Times*
> *May 6, 2021Updated 1:58 p.m. ET*
> *Internet service providers funded an effort that yielded millions of fake comments supporting the Federal Communications Commission's repeal of so-called net neutrality rules in 2017, the New York attorney general said on Thursday.*
> *Internet providers, working through a group called Broadband for America, spent $4.2 million on the project, the attorney general said. The effort generated roughly nine million comments to the agency and letters to Congress backing the rollback, almost all of which were signed by people who had never agreed to the use of their names on such comments, according to the investigation. Some of the names had instead been obtained earlier, in other marketing efforts, and were then used to submit comments, officials said. The agency approved the repeal in late 2017.*
> *Broadband for America's members include America's most prominent Internet providers, like AT&T, Comcast and* ***Charter****, as well as several trade groups representing the industry.*
> *Broadband for America, AT&T, Charter, and Comcast did not immediately respond to requests for comment.*

https://www.nytimes.com/2021/05/06/technology/Internet-providers-fake-comments-net-neutrality-new-york.html?link_id=5&can_id=fc43a50924502a3e547a3ad5d166f0f6&source=email-breaking-big-cables-fraudulent-comments-2&email_referrer=email_1167660&email_subject=fraud

PPS. This is as tone deaf, unethical, and immoral as Bezos building new twin yachts, while most people suffer because of the pandemic and unbridled and unregulated capitalism. At the going rate of $50k per mile, your bosses' pay raise alone would bring fiber to my house and to 600 other people. It is funny how shareholder return on investment is a concern when investing in rural broadband, but not when it comes to CEO compensation.

> **Charter CEO Tom Rutledge's Pay Rises to $38.8 Million in 2020**
> *The exec's compensation at the U.S. cable and Internet giant rose sharply from $8.74 million in 2019.*

https://www.hollywoodreporter.com/business/business-news/charter-ceo-tom-rutledges-pay-rises-to-38-8-million-in-2020-4146926/

So in the end after projecting more than ten thousand words, graphics, test data, and humorous (to me) song lyrics at Spectrum, I have a minor improvement in speed at a reduced cost for three years. Maybe, given that time they can fix their network. Or perhaps they will merge with another bad company.

A pyrrhic **victory** at best, me thinks.

And sometimes, just occasionally the good guys win one or two.

Cable Giants, ISPs, Telcos End Legal Fight Against California's Net Neutrality Law (theregister.com) 11

Posted by BeauHD on Friday May 06, 2022 @06:02PM from the case-closed dept.

An anonymous reader quotes a report from The Register: California Attorney General Rob Bonta on Wednesday welcomed the decision by a group of telecom and cable industry associations to abandon their legal challenge of the US state's net neutrality law SB822. "My office has fought for years to ensure that internet service providers can't interfere with or limit what Californians do online," said Bonta in a statement. "Now the case is finally over. Following multiple defeats in court, internet service providers have abandoned this effort to block enforcement of California's net neutrality law. With this victory, we've secured a free and open internet for California's 40 million residents once and for all."

In December 2017, then Federal Communications Commission (FCC) chair Ajit Pai tossed out the 2015 net neutrality rules put in place during the Obama administration, freeing broadband providers to block, throttle, and prioritize internet traffic, among other things -- all of which were disallowed under the 2015 rules. On September 30, 2018, then California Governor Jerry Brown signed into law Senate Bill 822 (SB822), which more or less restored those rules. That same day, the Justice Department under the Trump administration challenged the law, as subsequently did the broadband companies benefiting from what Pai at the time referred to as a "light-touch approach."

The Justice Department, under the Biden administration, ended its opposition to California's net neutrality law back in February, 2021. The industry plaintiffs continued fighting SB822 in court but faced a setback in January, 2022, when the US Court of Appeals for the Ninth Circuit refused to block the law's enforcement as litigation progressed. Now those groups -- ACA Connects (America's Communications Association), CTIA (The Wireless Association), NCTA (The Internet & Television Association), and USTelecom (The Broadband Association) -- have withdrawn too. The trade associations, with the agreement of Bonta, filed a joint stipulation of dismissal without prejudice which ends the telco legal challenge but allows the claim to be refiled at some later date.

Frontier Lied About Internet Speeds and 'Ripped Off Customers', FTC Says (arstechnica.com) 18

Posted by msmash on Friday May 06, 2022 @04:45PM from the time-to-face-the-music dept.

The Federal Trade Commission today said it "has moved to stop Internet service provider Frontier Communications from lying to consumers and charging them for high-speed Internet speeds it fails to deliver." From a report: Frontier was sued by the FTC in May 2021, and on Thursday, it agreed to a settlement with the FTC and district attorneys in Los Angeles County and Riverside County who represented the people of California. Frontier must pay $8.5 million to California "for investigation and litigation costs" and another $250,000 that will be distributed to Frontier customers who were harmed by Frontier's alleged actions. Frontier must also make changes, such as letting customers cancel service at no charge and "discounting the bills of California customers who have not been notified that they are receiving DSL service that is much slower than the highest advertised speed," the FTC said.

Charter/Spectrum Wisconsin IP assignments

IP ADDRESS NETBLOCKS

Charter Com. CHTR-HSA-2BLK (NET-24-240-0-0-1) 24.240.0.0-24.241.255.255

24.240.2.0-255 - Watertown, WI
24.240.3.0-255 - Watertown, WI
24.240.4.0-255 - Delavan, WI
24.240.5.0-127 - Delavan, WI
24.240.5.128-255 Elkhorn, WI
24.240.6.0-255 - Delavan, WI
24.240.7.0-255 - Delavan, WI
24.240.10.128-191 - Wautoma, WI
24.240.10.192-199 - Neshkoro, WI
24.240.10.200-209 - Wautoma, WI
24.240.10.210-228 - Adams, WI
24.240.10.229-255 - Redgranite, WI
24.240.11.0-255 - Mankato, MN
24.240.12.0-255 - Genoa City, WI
24.240.13.0-255 -Twin Lakes, WI
24.240.14.0-255 - Beaver Dam, WI
24.240.15.0-255 - Chippewa Falls, WI
24.240.32.0-255 - Madison, WI
24.240.33.0-255 - Madison, WI
24.240.34.0-255 - Madison, WI
24.240.35.0-255 - Madison, WI
24.240.36.0-255 - Madison, WI
24.240.37.0-255 - Madison, WI
24.240.38.0-255 - Madison, WI
24.240.39.0-255 - Madison, WI
24.240.40.0-255 - Madison, WI
24.240.41.0-255 - Madison, WI
24.240.42.0-255 - Madison, WI
24.240.43.0-255 - Madison, WI
24.240.44.0-255 - Madison, WI
24.240.45.0-255 - Oregon, WI
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24.240.65.0-255 - Janesville, WI

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24.240.70.128-255 - Fond du Lac, WI
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24.240.75.0-255 - Madison, WI
24.240.76.0-255 - Superior, WI
24.240.77.0-255 - Superior, WI
24.240.80.0-255 - Janesville, WI
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24.240.82.0-63 - Janesville, WI
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24.240.120.64-79 - Eau Claire, WI
24.240.120.80-95 - Beaver Dam, WI
24.240.120.96-111 - Rhinelander, WI
24.240.120.112-127 - Rhinelander, WI
24.240.120.128-143 - Sun Prairie, WI
24.240.120.144-159 - Houghton, MI
24.240.120.160-175 - Beaver Dam, WI
24.240.120.176-191 - Rice Lake, WI
24.240.120.208-223 - Rhinelander, WI
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24.240.120.240-255 - Milton, WI
24.240.121.0-15 - Wausau, WI
24.240.121.16-31 - Rhinelander, WI
24.240.121.32-47 - Beaver Dam, WI
24.240.121.48-63 - Wausau, WI
24.240.121.64-79 - Beloit, WI

24.240.121.80-111 - Madison, WI
24.240.121.112-143 - Onalaska, WI
24.240.121.144-159 - Milton, WI
24.240.121.160-175 - Juneau, WI
24.240.121.176-191 - Iron Mountain, MI
24.240.121.192-207 - Beloit, WI
24.240.121.208-223 - Tomah, WI
24.240.121.224-239 - Madison, WI
24.240.121.240-255 - Beloit, WI
24.240.122.0-15 - Waunakee, WI
24.240.122.16-47 - Madison, WI
24.240.122.48-63 - New Holstein, WI
24.240.122.64-79 - Fond du Lac, WI
24.240.122.80-95 - Wausau, WI
24.240.122.96-111 - Madison, WI
24.240.122.112-127 - Sheboygan, WI
24.240.122.128-143 - Madison, WI
24.240.122.144-151 - Wisconsin Rapids, WI
24.240.122.152-159 - Fond du Lac, WI
24.240.122.160-175 - Fitchburg, WI
24.240.122.176-179 - Waupaca, WI
24.240.122.180-183 - Eau Claire, WI
24.240.122.184-191 - Fitchburg, WI
24.240.122.192-207 - Madison, WI
24.240.122.208-223 - Iron Mountain, MI
24.240.122.224-239 - Waupaca, WI
24.240.122.240-255 - Portage, WI
24.240.123.0-15 - Eau Claire, WI
24.240.123.16-31 - Madison, WI
24.240.123.32-63 - West Bend, WI
24.240.123.64-95 - Rothschild, WI
24.240.123.96-111 - Wausau, WI
24.240.123.112-127 - Rothschild, WI
24.240.123.128-143 - Eau Claire, WI
24.240.123.144-159 - Watertown, WI
24.240.123.160-175 - Wausau, WI
24.240.123.176-191 - Waupaca, WI
24.240.123.192-207 - Lake Mills, WI
24.240.123.208-223 - Kewaskum, WI
24.240.123.224-239 - West Bend, WI
24.240.123.240-255 - Madison, WI

Part Two, Round Two (2023)

DEAR SPECTRUM_ROUND TWO_ (TWO YEARS LATER)

This time no lyrics, (well, maybe a few) no music, no BS, just the cold hard facts

Redux: so they just had to go and start it up again!

Those of you who read the first installment of this adventure in my previous book *The Insider Goes Deep* , and of course the first part of this book, learned of my months long battle with Charter/Spectrum to try to get them to provide me with Internet service as advertised. This was all triggered by an expensive speed upgrade that really wasn't. The only thing that noticeably increased was my monthly price. This story was repeated in the previous pages.

Writers such as myself need to use the Internet extensively for research and communication. A retired IT guy with lots of time on his hands has been and can again be a nightmare for monopolies like Charter/Spectrum.

Long story short, in the end their offer discounting my service was an admission of guilt _and_ of their inability to actually provide what it is that they advertise.

But then almost exactly two years later they apparently just could not help themselves and sent me the message below. Slow learners perhaps. They apparently never heard the expression to let sleeping dogs lie, or of leaving well enough alone.

Now keep in mind as background that they recently raised my monthly price from $59.99 to $69.99, and are planning to raise it to $79.99 next month, and $99.99 next year, while at the same time they are advertising a $49.95 300Mbps, with Wi-Fi and a mobile phone plan thrown in, to "new" customers.

Summary	
Spectrum Internet™	69.99
Total Estimated New Charges**	**$69.99**

Charge Details	
Spectrum Internet™	
Spectrum Internet Ultra	20.00
Ultra Free 36 Mos	-20.00
Your promotional rate has 13 months remaining	
Spectrum Internet	79.99
Ret Internet $10 Off 12m	-10.00
Your promotional rate has 1 months remaining	
Spectrum Internet™ Total	$69.99

Note: We do have this mostly feckless Federal Agency called the FCC (also the FTC) that in theory anyway, is supposed to require that advertised claims be reasonably substantiated.[7] (See my Book Three for my depressing and wholly inadequate interactions with these agencies and the Wisconsin consumer protection agencies.)

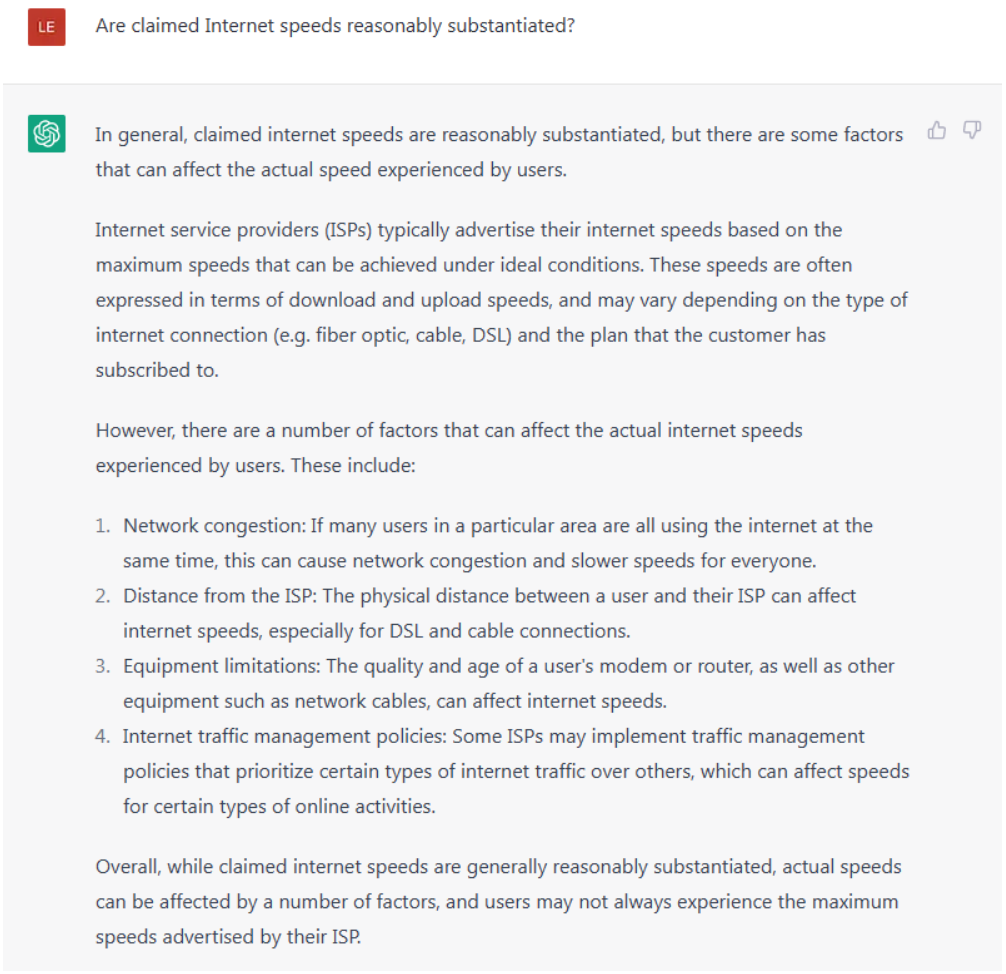
[7] *The Federal Trade Commission (FTC) requires advertisers to provide a reasonable basis for advertising and marketing claims. The process of demonstrating that reasonable basis is called claim substantiation.*

Are claimed Internet speeds reasonably substantiated?

Fiber and cable Internet have the biggest gap – with most people getting, on average, about 55% of the speeds they pay for

https://www.allconnect.com/blog/advertised-vs-actual-Internet-speeds

How about we ask our new buddy, ChatGPT?



Or perhaps a Purdue University expert.

"Despite the technical differences between both testing metrics (FCC and M-Lab), the lack of digital parity both in average speed tests and average advertised data is crystal clear. Higher advertised speeds may deter much needed investment in areas (rural, poorer) that need it the most when focusing on speed test results.

Second, both advertised and test speeds show that asymmetrical connections are the norm. Asymmetrical speeds place businesses, homes, and communities at a disadvantage, especially because upload speeds are significantly slower. This is not good when it comes to producing, or uploading content, in the digital economy. As COVID has shown by forcing multiple users in a home or business to utilize upload speeds more so than in pre-COVID times (videoconferencing, remote working, e-learning), slower upload speeds affect in a negative way online activities and participation of subscribers."

https://pcrd.purdue.edu/the-real-digital-divide-advertised-vs-actual-Internet-speeds/

From: Spectrum [mailto:Spectrum@email.spectrum.com]
Sent: Tuesday, January 10, 2023 4:31 PM
To: lefty@tcw.org
Subject: Great News! Your secure, reliable Internet service is now faster: 500 Mbps

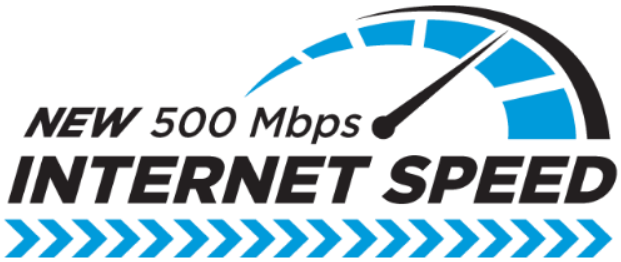
Spectrum

GREAT NEWS!

Your secure, reliable Internet service is now faster: at an unbelievable **500 Mbps**

Dear Lefty,
Fast just got faster! As part of our commitment to delivering better services at the best value, **we have upgraded your Internet speed to 500 Mbps**.
Your new speed will take your Internet usage to the next level. Plus, you'll continue to benefit from the enhanced privacy and security that comes with our FREE Internet Security Suite software.

YOU NOW HAVE FASTER INTERNET SPEED

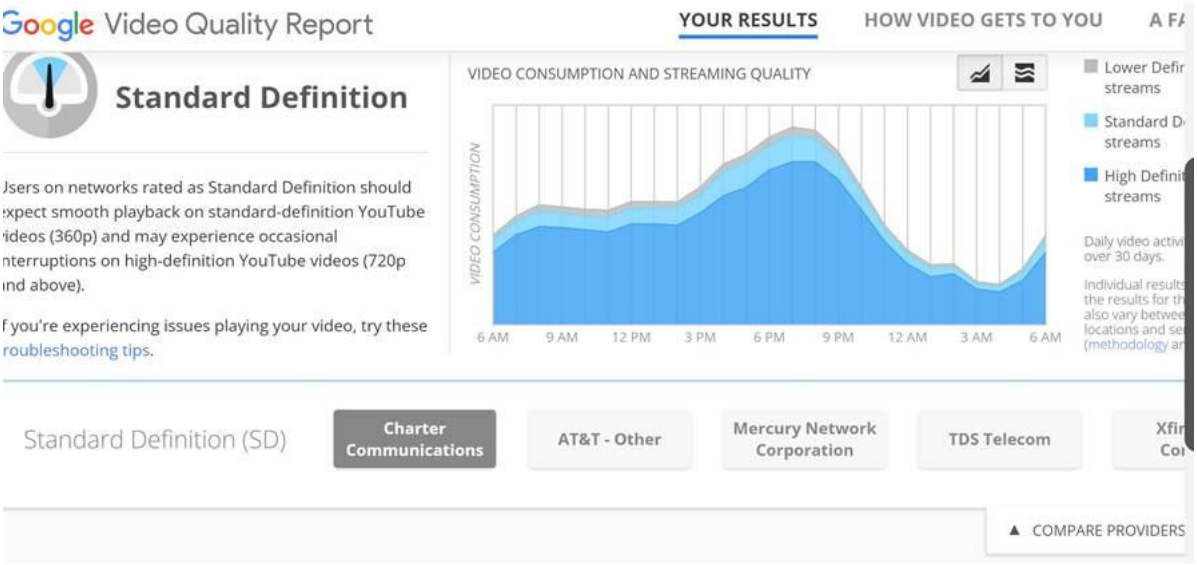


- Superior streaming on every device
- Better multiplayer gaming
- More speed, more reliability, ultra-low lag times*
- Do more on more devices throughout your home

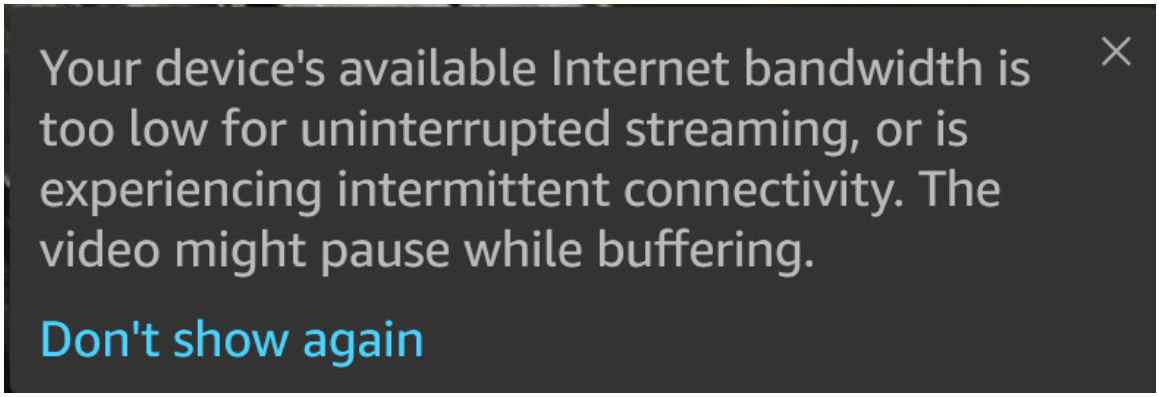
So being a cheeky lad and the curmudgeon that I have become in my elder years, they (Charter/Spectrum C-suite) received this message as a response:

From: Lefty [mailto: lefty@tcw.org]
Sent: Tuesday, March 07, 2023 8:58 AM
To: ExecVP@charter.com;COO@charter.com;CTO@charter.com;;ExecVP-NetOps@charter.com
Subject: : Re: Your six or more hops to anywhere are _still_ slowing me down!

Dear Spectrum,
Despite the fact that you keep raising the monthly price, and with only one computer is connected, this pops up when YouTube stops:



And get this when Amazon Prime video stops:



And yet, some testing results a month ago can occasionally look like this:

Netgear XR1000 Wi-Fi 6 gaming router connected to these computers	Desktop Intel(R) Wi-Fi 6 AX200 160MHz PCI-e board	Surface 7 Pro Plus Intel Wi-Fi 6 AX201 160MHz (Internal chip)	NUC Intel Wired Ethernet Connection I218-V 1Gb (Internal chip)
Operating System Software	Windows 10 Pro Version 189 LTSB Build 17763.1	Windows 10 Pro Version 21H2 Build 19044.1288	Windows 7 Pro Version 6.1 SP1 Build 760.1
Browser software			
Mozilla Firefox 108.0.2 (64-bit) Gecko rendering engine	https://fast.com/ 360 Mbps		https://fast.com/ 320 Mbps
	https://www.hostingsupport.io/ 383 Mbps		https://www.hostingsupport.io/ 234 Mbps
	https://www.speedtest.net/ 366 Mbps		https://www.speedtest.net/ 158 Mbps
Brave Version 1.46.144 Chromium rendering engine 108.0.5359.128 (Official Build) (64-bit)	https://fast.com/ 700 Mbps	https://fast.com/ 710 Mbps	https://fast.com/ 410 Mbps
	https://www.hostingsupport.io/ 413 Mbps	https://www.hostingsupport.io/ 563 Mbps	https://www.hostingsupport.io/ 302 Mbps
	https://www.speedtest.net/ 424 Mbps	https://www.speedtest.net/ 562 Mbps	https://www.speedtest.net/ 229 Mbps
		Surface 7 Pro Plus Ethernet (1Gbps dock chip)	
		https://fast.com/ 670 Mbps (spiked to 1.4 Gbps)	
		https://www.hostingsupport.io/ 536 Mbps	
		https://www.speedtest.net/ 457 Mbps	
Legend			
Fast.com (Netflix) Server(s) Minneapolis, Chicago		Note: What it looks like in a prelim analysis is that the Brave browser is 10-90 percent faster than the Firefox browser, and the AX201 wireless is faster than the AX200. It also looks like Win10 is faster than Win7. (better TCP/IP?)	
https://www.hostingsupport.io/ CyberLynk Milwaukee, WI			
https://www.speedtest.net/ Bertram Communications Random Lake, WI			

When will you get this figured out?
Lefty

Then they sent me these messages, which is very rare since their return correspondence based on my past experience is always by voice never leaving a written record. (perhaps the reason for the recall?)

From: Escalation Specialist [mailto: escalation@charter.com]
Sent: Tuesday, March 07, 2023 12:20 PM
To: lefty@tcw.org
Subject: Your Charter Spectrum Correspondence
Mr. Lefty Insider,
I am contacting you to acknowledge we have received your recent correspondence to Charter (Spectrum) regarding your concern. Someone from the appropriate leadership team will be contacting you within 24 hours to acquire more details, if needed, and inform you of the next steps to address your concern. If you have not already done so, please provide the best phone number to reach you at and best time to contact you. In the meantime, if you have any additional questions or concerns, you may contact me at 833-926-8249 at your earliest convenience. I am in the office from the hours of Tuesday – Saturday 8am -4:30 pm EST.
Thank you, Escalation Specialist

-----Original Message-----
From: Escalation Specialist [mailto: escalation@charter.com]
Sent: Tuesday, March 07, 2023 12:26 PM
To: lefty@tcw.org
Subject: Recall: Your Charter Spectrum Correspondence

Escalation Specialist would like to recall the message, "Your Charter Spectrum Correspondence".
E-MAIL CONFIDENTIALITY NOTICE:
Corporate Customer Escalation Specialist II

The contents of this e-mail message and any attachments are intended solely for the addressee(s) and may contain confidential and/or legally privileged information. If you are not the intended recipient of this message or if this message has been addressed to you in error, please immediately alert the sender by reply e-mail and then delete this message and any attachments. If you are not the intended recipient, you are notified that any use, dissemination, distribution, copying, or storage of this message or any attachment is strictly prohibited.

I then received a phone call from their tech support wanting to recover well-treaded ground (no corporate memory here) and asked me if I knew where my modem was so that I could try "turning if off and back on again." Sheesh!

My repetitive pleas to have them escalate this to a higher level were finally acknowledged but only if I agreed to run some tests from the modem and accept a tech support appointment. I agreed to this in exchange for their email address, to send my data for them to forward to a higher level support, which I reluctantly agreed to.

So I sent my modem test data from one of my ten computers, and then later test data from a second computer, so that they could not blame one computer, which is what they do. I also escalated this on my own to escalation@charter.com and beyond with the following note:

From: Lefty [mailto: lefty@tcw.org]
Sent: Wednesday, March 08, 2023 1:25 PM
To: Escalation Specialist [mailto: < escalation@charter.com >; '<SVC_CCEDCharter@charter.com>
Cc: 'mailto: ExecAssist@charter.com'; ExecVP@charter.com; COO@charter.com; CTO@charter.com; ExecVP-NetOps@charter.com
Subject: Speed test results via modem only

Escalation Specialist et al,

Was contacted by your low level tech support who requested this data. Lisa was well intentioned but I believe ill-equipped to deal with this ongoing problem.

I have moved past the need for a script reader and hopefully onto someone who can analyze this data and provide a final solution.

From: Lefty [mailto: lefty@tcw.org]
Sent: Wednesday, March 08, 2023 1:57 PM
To: 'lisa.m.turner@charter.com'
Subject: Speed test results via modem only
Support,
Spectrum Ultra Plan 500Mbps
Two person, ten computer household, one computer Ethernet connected IP Address 23.87.28.17
Ethernet adapter Local Area Connection:
Connection-specific DNS Suffix . : eau.wi.charter.com
Description : Intel Ethernet Connection I218-V (Data Rate Per Port 1GbE)
Physical Address. . . . . : EC-A8-6B-FD-02-FD
DHCP Enabled. . . . . : Yes
Auto configuration Enabled . . . . : Yes
IPv4 Address. . . . . : 23.87.28.17(Preferred)
Subnet Mask . . . . . : 255.255.255.0
Lease Obtained. . . . . : Wednesday, March 08, 2023 11:58:24 AM
Lease Expires . . . . . : Wednesday, March 08, 2023 12:58:23 PM
Default Gateway . . . . . : 23.87.28.1
DHCP Server . . . . . : 68.114.248.1
DNS Servers . . . . . : 71.10.216.1, 71.10.216.2
NetBIOS over TCP/IP. . . . . : Enabled

SPEED TESTS CONDUCTED 3/8/23 12PM
SPEEDTEST.NET
Wausau Supply Company Schofield, WI
Download Mbps 309.34
Upload Mbps 22.82
CyberLynk Network Milwaukee, WI (this is where by webserver and email server are hosted)
Download Mbps 211.36
Upload Mbps 22.83

CYBERLYNK SITE
CyberLynk Network Milwaukee, WI
Test results
Ping 21ms **Jitter** 1ms
Download Speed 290.4 Mbps
Upload Speed 22.7 Mbps
Spectrum 23.87.28.17
https://www.hostingsupport.io/

FAST
https://fast.com/
Down load Speed 230 Mbps
Latency Unloaded 44 ms Loaded 47 ms
Upload Speed 23 Mbps
Client Tworivers, US 2002:1757:1c11::1757:1c11 Spectrum
Server(s) Chicago, US | Ashburn, US
Settings DL 250MB UPL 20MB

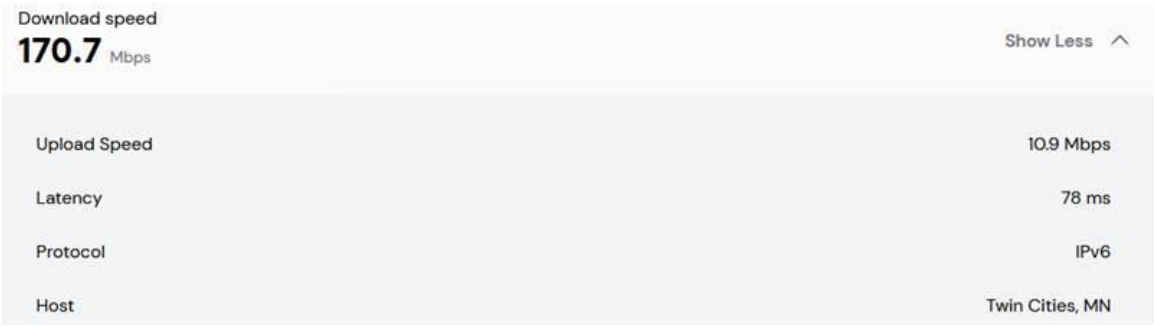
SPECTRUM
https://www.spectrum.com/Internet/speed-test
Download 287.8 Mbps
Upload 22.5 Mbps
Spectrum Livonia, MI

MLAB
https://speed.measurementlab.net/#/
Test Server Chicago, US
Download 46.40 Mb/s
Upload 19.68 Mb/s
Latency 38 ms
Retransmission 0.00%

GOOGLE
https://fiber.google.com/speedtest/
Schofield, WI
Ping 14 ms
Jitter 4 ms
Download 248.9 Mbps
Upload 22.8 Mbps
Wausau Supply Company Schofield, WI
Spectrum 23.87.28.17

AMAZON
https://testmy.net/hoststats/amazoncom
:::.. Internet Speed Test Result Details ..:::
Download Connection Speed:: 216545.3 kbps or **216.5 Mbps**
Download Speed Test Size:: 90.9 MB or 93126 kB or 95361024 bytes
Download Binary File Transfer Speed:: 27068 kB/s or 27.1 MB/s
Upload Connection Speed:: 5045 kbps or **5 Mbps**
Upload Speed Test Size:: 6.1 MB or 6272 kB or 6422528 bytes
Upload Binary File Transfer Speed:: 631 kB/s
Timed:: Download: 3.523 seconds | Upload: 10.184 seconds
Tested At:: https://TestMy.net
Test Time:: 2023-03-08 12:32:43 Local Time
Client Location:: Two Rivers, WI US https://testmy.net/city/two_rivers_wi
Target:: Dallas, TX https://dallas.testmy.net
Validation:: https://testmy.net/db/2xM5pRcu~.BWIEzgXLf
TiP Measurement Summary (Download):: Min 89.99 Mbps | Middle Avg 315.59 Mbps | Max 744.15 Mbps | 157% Variance
Client Stats:: https://testmy.net/compID/16970773019802
User Agent:: Mozilla/5.0 (Windows NT 6.1; Win64; x64; rv:109.0) Gecko/20100101 Firefox/110.0 [!]

XFINITY
https://speedtest.xfinity.com/



SPEAKEASY
https://www.speakeasy.net/speedtest/
Schofield, WI
Test results
Ping 13 ms
Jitter 2 ms
Download 480.6 Mbps
Upload 22.9 Mbps

TESTMYSPEED
https://testmyspeed.onl/
Wausau Supply Company Schofield, WI
Test results
Ping 13 ms
Jitter 1 ms
Download 456.8 Mbps
Upload 22.9 Mbps

TELSTRA SPEED TEST Sydney, Australia
https://speedtest.telstra.com/
34.2Mbps DOWNLOAD SPEED
19.9Mbps UPLOAD SPEED

Remember that this is just a snap shot of one point in time and does not explain the messages listed below.

This should be plenty for you to look at.

Lefty

From: Lefty [mailto: lefty@tcw.org]
Sent: Thursday, March 09, 2023 5:07 AM
To: Phone support@charter.com
Subject: : Speed test results via modem only
Support,
What follows is modem test data from a second computer, I have ten, which shows the same substandard, and random data from speed tests.
Please forward and escalate.
Lefty

SECOND COMPUTER SPEED TEST RESULTS

Ipconfig

Ethernet adapter Ethernet:

Connection-specific DNS Suffix . : eau.wi.charter.com
Description . . . . . : Surface Ethernet Adapter 1 gigabit Ethernet over CAT 7 cables
Physical Address. . . . . : B8-31-B5-46-20-46
DHCP Enabled. . . . . : Yes
Autoconfiguration Enabled . . . . : Yes
Lease Obtained. . . . . : Wednesday, March 8, 2023 6:46:21 AM
Lease Expires . . . . . : Wednesday, March 8, 2023 3:50:28 PM
IPv4 Address. . . . . : 71.90.115.126(Preferred)
Subnet Mask . . . . . : 255.255.252.0
Lease Obtained. . . . . : Wednesday, March 8, 2023 6:46:39 AM
Lease Expires . . . . . : Wednesday, March 8, 2023 3:50:46 PM
Default Gateway . . . . . : fe80::201:5cff:fe9e:b246%3 71.90.112.1
DHCP Server . . . . . : 68.114.248.1
DHCPv6 IAID . . . . . : 62402997
DHCPv6 Client DUID. . . . . : 00-01-00-01-2B-48-DC-B4-B8-31-B5-46-20-46
DNS Servers 71.10.216.1 71.10.216.2

SPEEDTESTS

Speedtest.net
DOWNLOAD 94.29 Mbps
UPLOAD 22.95 Mbps
Ping ms 16 93 25
Wausau Supply Company Schofield, WI

DOWNLOAD 374.09 Mbps
UPLOAD Mbps 22.89 Mbps
Ping ms 24 48 34
CyberLynk Network Milwaukee, WI

CyberLynk Network hostingsupport.io
PING 24 ms JITTER 1 ms
DOWNLOAD SPEED 343.8 Mbps
UPLOAD SPEED 23.0 Mbps
CyberLynk Network Milwaukee, WI

MLAB
https://speed.measurementlab.net/#/

	Test Server	**Chicago, US**
	Download	**56.29 Mb/s**
	Upload	**21.31 Mb/s**
	Latency	**31 ms**
	Retransmission	**0.00%**

FAST.COM
Your Internet speed is 57 **Mbps**
Latency Unloaded **24** ms
Loaded **303** ms
Upload Speed **20** Mbps
Client Two Rivers, US 2600:6c44:7022:100:cd49:368b:dc23:8c8e Spectrum
Server(s) Chicago, Minneapolis

Settings	180MB	40MB

SPECTRUM
https://www.spectrum.com/Internet/speed-test
Your speed test has finished. Your ping result is 17. Your jitter result is 4.
Test results
DOWNLOAD 59.0 Mbps
UPLOAD 22.3 Mbps
Spectrum Eau Claire, WI

Then later I sent this:

From: Lefty [mailto: lefty@tcw.org]
Sent: Thursday, March 09, 2023 2:55 PM
To: 'Phone Support@charter.com' <support@charter.com>
Subject: Got your voicemail

Support,

Thanks for the call.

A TechMgr from Spectrum reached out to me and we spoke and setup a time to talk again on Monday.

Lefty

From: Spectrum [mailto:MyAccount@spectrumemails.com]
Sent: Wednesday, March 08, 2023 2:07 PM
To: lefty@tcw.org
Subject: Confirmation of Your Service Appointment Request

Confirmation of Your Service Appointment

Hello Lefty,

The details of your service appointment are listed below.
Our technician is scheduled to arrive on **Monday, March 13, 2023 between 01:00 PM - 02:00 PM**.

Reschedule or Cancel

Appointments typically take between one and three hours to complete after the technician arrives.
An adult over the age of 18 with a government-issued photo ID must be present during our visit.
Here's how you can prepare for your Spectrum visit.
Thank you for choosing Spectrum, Spectrum Support Team

Please do not reply to this message. Replies to this message are routed to an unmonitored mailbox. If we can be of further assistance, please visit Spectrum support.

©2023 Charter Communications. All rights reserved | Privacy Policy This message was sent by Charter Communications.

Shortly after this, there was a voice mail from Spectrum saying that an outage in the area has now been fixed, so I could cancel my appointment if I wanted. What was that all about?

Shortly after that, I got a call from a tech support supervisor, who I had worked with two years ago, to discuss my issue. I re-explained my issues and he told me that they were in the process of reducing the size of my "node" (I was told it was about 210 devices two years ago) to provide me with more bandwidth. He did not know if the work would be completed by Monday but he would call me then, if there was a delay he would say so, and if not to run some more post work tests.

So they then got this sent to them:

From: Lefty [mailto: lefty@tcw.org]
Sent: Thursday, March 09, 2023 12:11 PM
To: 'TechMgr' <TechMgr@charter.com>
Subject: : Speed test results via modem only
Importance: High

TechMgr,
Got your voicemail and left you one as well.
Below is background info for our call, in case you do not already have it.
What I would like to see prior to the Monday apt. is that you rerun these same tests that I did at your TR office, and then perhaps again at my pedestal.
Then we can compare notes.
We need to keep in mind that these tests are a onetime snapshot and that web based speed tests in general are random and flaky, at least in my experience. Example directly below.
Lefty

On 1/9/23 I got this:
On my Surface 7 Pro Plus tablet with Win10 and Intel Wi-Fi 6 AX201 160MHz wireless@5.2 GHz.
https://fast.com/ Chicago 710 Mbps
https://www.hostingsupport.io/ Franklin, WI 563 Mbps
https://www.speedtest.net/ Random Lake, WI 562 Mbps

Then I also sent this one to keep things stirred up:

From: Lefty [mailto: lefty@tcw.org]
Sent: Thursday, March 09, 2023 5:58 AM
To: 'Escalation Specialist' [mailto: <escalation@charter.com>;'ccedcharter@charter.com'
Cc: ' ExecAssist@charter.com' ; 'ExecVP@charter.com' ; 'COO@charter.com' 'CTO@charter.com' 'ExecVP@charter.com; ExecVP-NetOps@charter.com'
Subject: : Speed test results via modem only
Importance: High

Escalation Specialist,
Was contacted by your low level tech support again yesterday who requested the data listed below. She was surprised to learn that my speeds directly from the modem were substandard. She offered a technician to come to my house and I explained that it was much more complicated than that. After some convincing on my part, I got her to accept this data via email with a promise to forward and escalate.
My past experience is that that your technician will come out and connect his meter to my incoming cable and tell me that it is all within specs. Then he will connect a Spectrum wireless router to my modem, connect his mobile phone to that, and pronounce the system OK. A month or two later, I will then get a bill for the $25 service call, of course adding some insult to the injury.
She insisted on dispatching a technician scheduled for Monday, March 13, 2023 between 01:00 PM - 02:00 PM. I insisted on a phone call prior to discuss what was going to happen during this visit.
In this ongoing comedy of errors, I received a phone voicemail from Spectrum yesterday explaining that a local service outage has been fixed and suggested that I could cancel this appointment.
In my view, this level of your technical support does not have the skills or tools to deal with this ongoing problem.

What follows is modem test data from a second computer, I have ten, which shows the same substandard, and random data from speed tests.
What would be more valuable would be for you to place a larger test file (5-10 GB) on one of your servers, say the speed test server in Eau Claire (https://www.spectrum.com/Internet/speed-test) and have me download that to test actual real world speed. I have done this on my hosted CyberLynk server, but I am sure that you will not accept that data.
Lefty

And then I sent this one:

From: Lefty [mailto: lefty@tcw.org]
Sent: Thursday, March 09, 2023 1:52 PM
To: 'TechMgr@charter.com' <TechMgr@charter.com>
Subject: : Speed test results via modem only
Importance: High

TechMgr,
Some additional random insights:
If I have a computer with a 10Gbps USB C port connected to a 2.5 Gbps Ethernet adapter connected with a 10Gbps Cat 7 cable to a 1Gbps modem port, wouldn't the only bottleneck be the Spectrum network? No answer yet.
Does your modem that is provisioned with 1Gbps service have a 1Gbps Ethernet port, or is it 2 or 3 Gbps? Answer was it has a 1Gbps port and maybe does 800-850 Mbps through that port.

Well that certainly does not match the 1000 Mbps they advertise, nor the realistic 940 Mbps they claim. It would be a not believable fact to expect the efficiency of a 1000Mbps Ethernet port to deliver 940Mbps consistently.

Summary of previous test data:

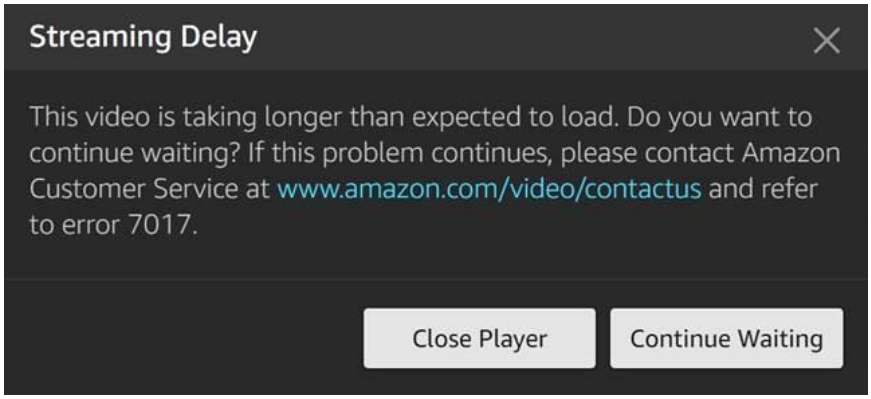
Wednesday, March 8, 2023 3:50:28 PM	SPEED TESTS CONDUCTED 3/8/23 12PM
Win 10/Brave Surface Ethernet Adapter 1 gigabit Ethernet over CAT 7 cables	**Win 7/Firefox NUC Ethernet Adapter 1 gigabit Ethernet over CAT 7 cables**
Speedtest.net DOWNLOAD 94.29 Mbps UPLOAD 22.95 Mbps Ping ms 16 93	SPEEDTEST.NET Download Mbps 309.34 Upload Mbps 22.82
Wausau Supply Company Schofield, WI	Wausau Supply Company Schofield, WI
DOWNLOAD 374.09 Mbps UPLOAD Mbps 22.89 Mbps Ping ms 24 48 34	Download Mbps 211.36 Upload Mbps 22.83 CyberLynk Network Milwaukee
CyberLynk Network Milwaukee, WI	
CyberLynk Network hostingsupport.io https://www.hostingsupport.io/	CyberLynk Network hostingsupport.io https://www.hostingsupport.io/
PING 24 ms JITTER 1 ms DOWNLOAD SPEED 343.8 Mbps UPLOAD SPEED 23.0	Download Speed 290.4 Mbps Upload Speed 22.7 Mbps
MLAB https://speed.measurementlab.net/#/ Chicago	MLAB https://speed.measurementlab.net/#/ Test Server Chicago
DL 56.29 Mbps UL 21.31 Mbps Latency 31ms	Download 46.40 Mb/s Upload 19.68 Mb/s
FAST.COM Your Internet speed is 57 Mbps Upload Speed 20 Mbps Spectrum	FAST.COM Your Internet speed is 57 Mbps Upload Speed 20 Mbps Spectrum
Server(s) Chicago	Server(s) Chicago
SPECTRUM https://www.spectrum.com/internet/speed-test download 59.0	SPECTRUM https://www.spectrum.com/internet/speed-test download 287
Mbps upload 22.3 Mbps	Mbps upload 22.5 Mbps

Assuming you can replicate my results:
What if we swapped out my modem and provisioned it for 1Gbps? Would I be able to achieve something close to 500Mbps on a consistent basis?
Lefty

And as an afterthought, I sent this:

From: Lefty [mailto: lefty@tcw.org]
Sent: Thursday, March 09, 2023 9:52 PM
To: 'TechMgr@charter.com' <TechMgr@charter.com>
Subject: : Speed test results via modem only
Importance: High
TechMgr,
One more thing I thought of. This is the link to the 4GB test file that I uploaded to my webserver at CyberLynk. **http://tcw.org/downloadtestfile.iso**
PS. Lisa from your tech support called today to follow up to make sure that I was contacted. She is persistent.
Lefty

From: Lefty [mailto: lefty@tcw.org]
Sent: Friday, March 10, 2023 11:20 AM
To: TechMgr@charter.com
Subject: bandwidth at 1011 Starlight Drive
TechMgr,
Spoke with your tech at my pedestal this am. Brave guy out in a blizzard before the roads were plowed. Anyway, I told him that the connection took a turn for the worse last evening, the wife was shopping for flooring and the website was practically unusable.
Speed tests were 50 or so download and 5-10 upload.
He said he did not work on it until after midnight, so I do not know what that bandwidth drop was all about. But I got this message today.



An online explanation.

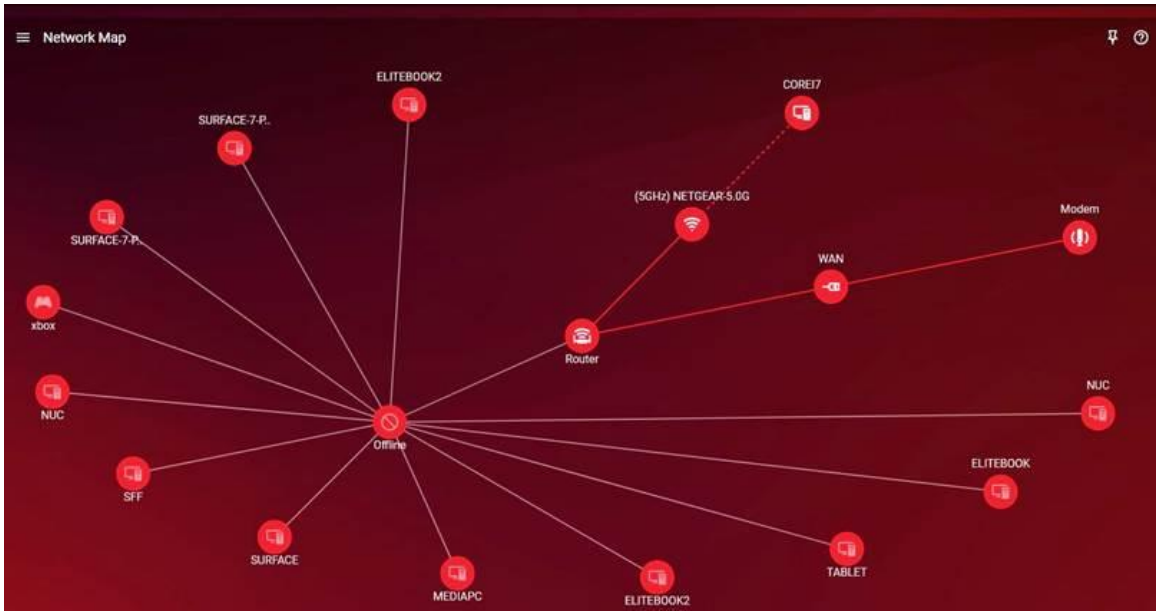
Amazon Prime Error 7017 'Video is taking longer than expected...
appuals.com › home › streaming › amazon
June 29, 2021 - But if you try to stream content from Amazon Prime from a Smart TV natively or using a dongle like Chromecast or Roku, the bandwidth requirement is 3.5 Mbps. If you're on a limited plan, there's a chance that you might be encountering the error code 7017 because **your ISP (Internet Service Provider) is not currently providing you with enough bandwidth to use this service** – Most likely due to a technical reason (especially if previously you were able to stream normally).

Attached is source spreadsheet from the Wed. tests.
Talk to you on Monday,
Lefty

From: Lefty [mailto: lefty@tcw.org]
Sent: Friday, March 10, 2023 12:18 PM
To: 'TechMgr@charter.com' <TechMgr@charter.com>
Subject: bandwidth usage
TechMgr,
Not to be a pest, but this is something you might like to know, so as you don' think I am a bandwidth hog because I have ten machines.
Of the ten, one is connected full time, the Ethernet NUC. Of the others connected wirelessly, four are actively used on and off, and five are typically off completely.
One is in the garage and is off during the winter, *but the surround sound and acoustics out there are amazing*, anyway I have a software utility that shuts off Internet connections when not in use on the active ones.
Btw, can you look at my modem and see how much bandwidth I am using in a month?
I would be interested in knowing that.

PS. I also recently got this bogus message from Spectrum. Of course no times, dates, device IP address(s) or anything else helpful. Do not know what triggered this, but my machines are well protected, software and hardware firewalls, and frequently scanned for malware with AV and MB software.
https://svp.skycreek.com/svpven-services/emailwebviewer?id=22610914235837-2263002664729480-ba10af8ccdefd4328d120e997651209a7b9588ff
Lefty

Netgear network router mapping:



An older Windows network mapping:

Network map of
Wireless Network Connection 8 - NETGEAR-5.0G
CoreI7
BA-0667E8
Windows7Media..
Intel SFF
Intel NUC
Elitebook2
Elitebook
Dock
Win 7 Samsung Tablet
Win 10 Media PC
Wireless Display
Win 10 Surface Tablet
XR1000
Router
Modem
Peripherals
Microsoft Wireless Transceiver
Wireless Keyboard 1000
Wireless Optical Mouse 2000
Xbox 360 Media Center Extender
HP Color LaserJet 2600n
Das Keyboard P13
HP LaserJet 2300
A3 2400S Scanner
IP LaserJet 4350 PCL 5
HP Universal Printing PCL 6 (M452dn)
HH241
HH241
Spectrum
INTERNET ULTRA
500
Internet

In a continuing effort to collect data, I sent this:

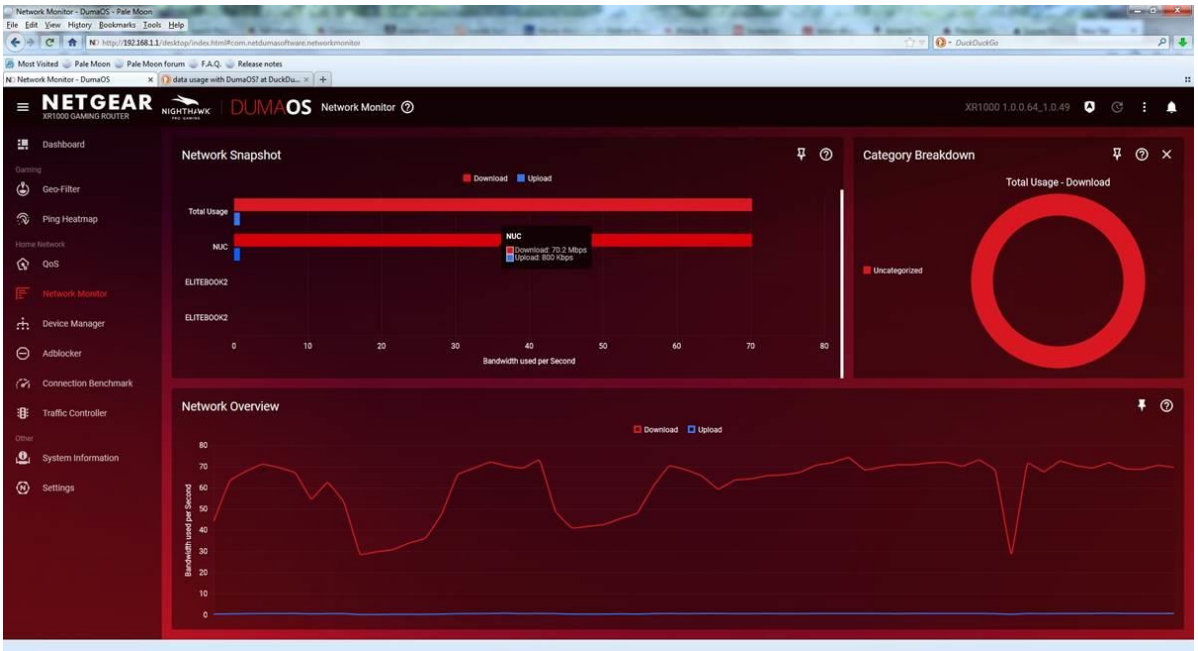
From: Lefty [mailto: lefty@tcw.org]
Sent: Saturday, March 11, 2023 9:36 AM
To: TechMgr@charter.com
Subject: More data and info
TechMgr,
So I asked you about my data usage and then I had a thought that I could probably do this myself at my router. See below.
If my math is right, not my strong suit, 516524 Bytes = 0.516524 MB transmitted and about the same received across two days' time since I rebooted my router. If in fact my router data is correct.
This seems quite a bit off, as you can see below that I just downloaded a 33.4MB browser update.
I am currently running a router monitor to look at this closer, because I can't understand nor explain this.

In terms of speed, I ran the following router speed test, but I have seen dubious results, acknowledged by DumaOS, from this test before.
According to NetDuma, this test will use the closest available server in the independent MLabs (FCC Approved) infrastructure for speed tests.

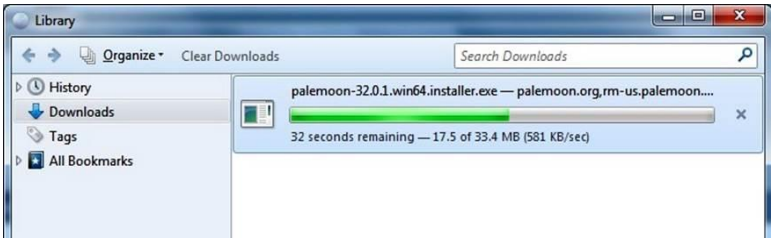
Microsoft Excel
97-2003 Worksheet
http://tcw.org/OS & Browser compare.pdf

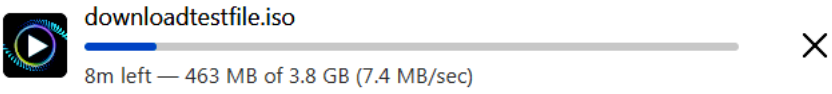
So I looked at network monitor and discovered that I cannot do historical usage for the router, just for a client. But am looking into SNMP based monitoring program, which can get bandwidth and data use information directly from the router if it is supported.

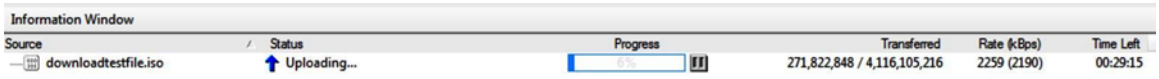
This is what the router network monitor will show me during at test file download:
Definitely not good here.



I did a browser update today and got this: Not quite 6 Mbps on the download. This is an html and not ftp download, which are typically worse.







I have 12 hops to my website. My switched packets ping pong around Charter/Spectrum/TWC/ Bright House Networks or whatever a bit and then hit my ISP's OG datacenter in Racine and finally Milwaukee (Franklin) where my site sits on a Linux server. CyberLynk has some pretty big pipes there from Roadrunner, AT&T and Charter etc. 10Gbps Internet backbone.

> "We are providing a full 1Gbps connection to the speedtest.net servers we run in our datacenters. They run at 600-800Mbps throughout the day. So you speedtests might be affected by this traffic too."

> "We use http://www.noction.com to spread our Internet bandwidth across SIX different Internet providers in our Milwaukee datacenter to try and ensure the best/fastest routes in/out of our Milwaukee datacenter on a 10Gbps backbone."

I know that hops are not the be all and end all. A traceroute will show you how many layer 3 hops you are getting through from A to B. However, I could be going through hundreds of switches in between. I could also be going through 10 ISP routers running a layer 2 VPN which appears as a single hop. A Multiprotocol Label Switching or MPLS network could hide its internals, or show its internals to you. I could also have transparent firewalls in the path as well. And then there is your peering and sharing agreements with your ISP, but don't get me started on that.

No hops to Virginia

#		Country	Town	Lat	Lon	IP	Hostname
1		United States	Two Rivers	44.166	-87.5832	192.168.1.1	(None)
2		*	*	44.166	-87.5832	*	*
3		United States	(Unknown)	37.751	-97.822	96.34.25.20	lag-62-10.dtr01twrvwi.netops.charter.com
4		United States	(Unknown)	37.751	-97.822	96.34.30.25	lag-204.crr01stptwi.netops.charter.com
5		United States	(Unknown)	37.751	-97.822	65.29.45.255	lag-9.mcr01stptwibx.netops.charter.com
6		United States	(Unknown)	37.751	-97.822	65.29.45.5	lag-103.mcr01fdulwign.netops.charter.com
7		United States	(Unknown)	37.751	-97.822	65.29.44.217	lag-102.mcr01milzwift.netops.charter.com
8		United States	(Unknown)	37.751	-97.822	76.58.45.185	076-058-045-185.inf.spectrum.com
9		United States	(Unknown)	37.751	-97.822	65.189.180....	(None)
10		United States	Milwaukee	43.067	-87.9682	67.52.5.114	rrcs-67-52-5-114.west.biz.rr.com
11		United States	Racine	42.7712	-87.7984	66.185.29.206	static.66.185.29.206.cyberlynk.net
12		United States	(Unknown)	37.751	-97.822	199.195.14...	eau.a2u2.com

This is what my connections to Charter.com looks like on Open Visual Traceroute. From me to the Charter/Spectrum NAP in Colorado and on to the main Internet OG NAP in Virginia and back.

Why do my packets go to Virginia?

I have mentioned this before on the phone with you that based on my thirty years' experience in these matters, we are unlikely to solve a random and flakey connection problem with random and flakey speed test methodologies. I suggested that we go old school here and actually download and upload a file that you put a download test file on your network as I have done on my webserver.

But this is not really on your network system so probably a good place to put this download test file on the Charter network would be at your datacenter in Colorado?
Or even better on one of your servers in Ashburn, VA at the old Mae East NAP.
And so it goes, but I think that we have somewhat of a baseline established for the future now.
PS. Back in the early 2000's, I had a business Point-to-Point broadband wireless connection to CyberLynk when I was a dial-up ISP. They provided me with a web link to look at my data usage in real-time via SNMP I believe. I believe that this was some commercial grade software called PRTG.[8]
Can you provide such a service from your TR office link to my modem?
Lefty
The ultimate answer was an unsure regarding SNMP data collection, with their datacenter Scope software, but a definite NO to me having any access.

From: Lefty [mailto: lefty@tcw.org]
Sent: Sunday, March 12, 2023 10:59 AM
To: TechMgr@charter.com
Cc: Escalation" <escalation@charter.com>; ' <ccedcharter@charter.com>; ExecAssist@charter.com; ExecVP@charter.com; COO@charter.com; CTO@charter.com; ExecVP-NetOps@charter.com
Subject: Chat GPT and Brave Search Review Spectrum Internet Service

TechMgr,
Not to pile on, because I know you are working on it, but the frustration remains mine.
I know, I know, but I just could not help myself.
Look forward to your call on Monday,
Lefty

[8] *PRTG is a network monitoring tool that helps you to know bandwidth and resource consumption via the Simple Network Management Protocol or SNMP.*

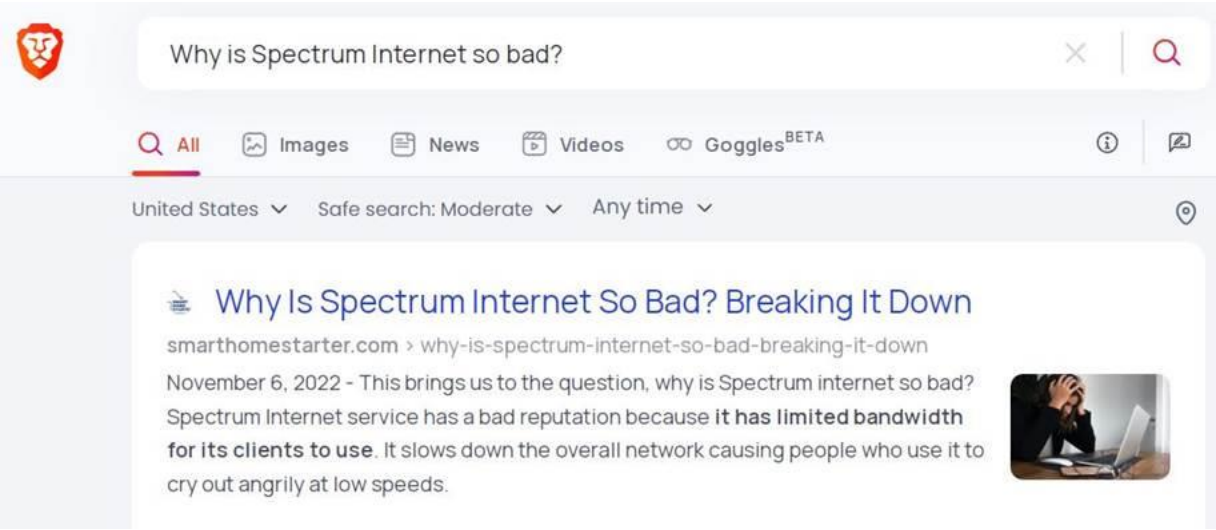
Two sources!

LE Why is Spectrum Internet so bad?

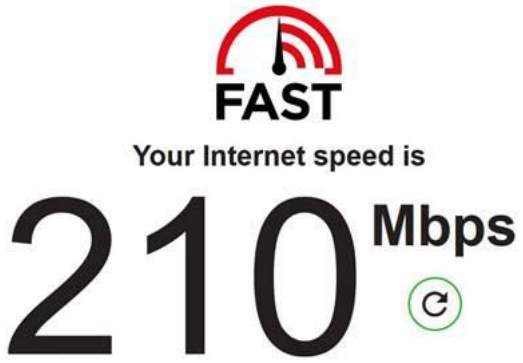
As an AI language model, I don't have personal experience using Spectrum Internet, but I can provide some general reasons why people might perceive it as bad:

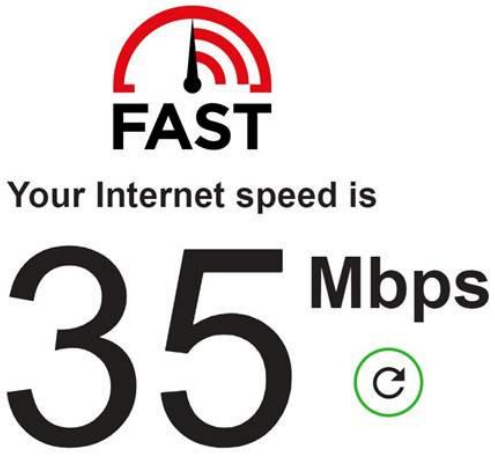
1. Overcrowding: If too many people are using the internet at once in your area, it can slow down your connection speed, making it feel like the internet is "bad". This can happen with any internet provider, not just Spectrum.
2. Infrastructure issues: Internet service relies on complex infrastructure, including cables, routers, and switches. If any of these components are damaged or outdated, it can affect the quality of your connection.
3. Technical issues: Sometimes, internet service can be affected by technical issues like software bugs, server downtime, or other problems that can cause disruptions in service.
4. Price: Some customers may feel that the price of Spectrum Internet is too high for the quality of service they receive, leading them to believe that it's "bad."
5. Personal preference: Everyone has different internet needs and preferences. Some people may simply prefer a different provider or a different type of connection, such as fiber optic or satellite internet.

Ultimately, the quality of your internet service can depend on a variety of factors, and experiences can vary depending on location, usage, and other factors. It's always a good idea to research and compare different providers in your area to find the one that best meets your needs.

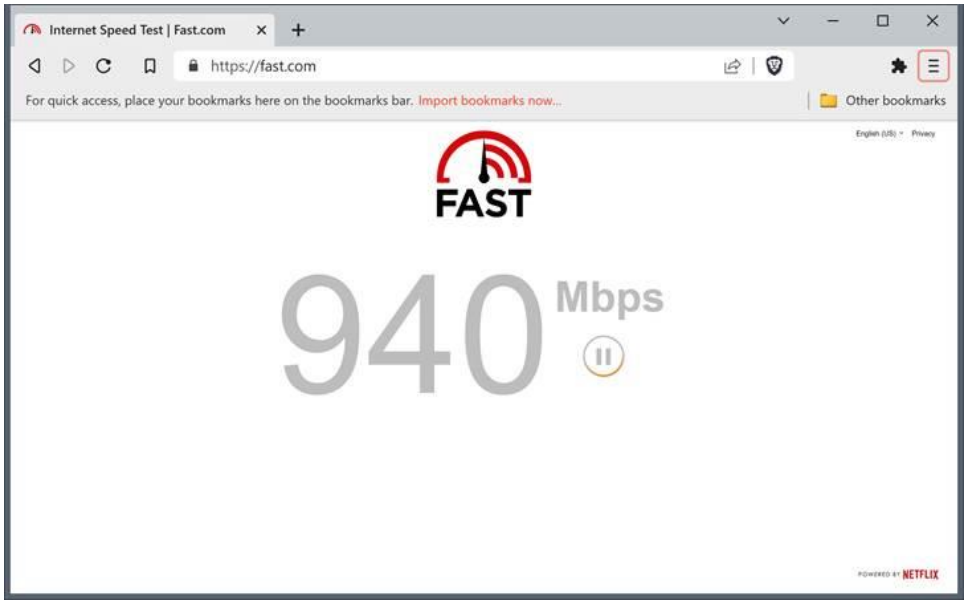


Got these test results today from two of my wireless computers.





And as I told you on the phone, I got this one two months ago.



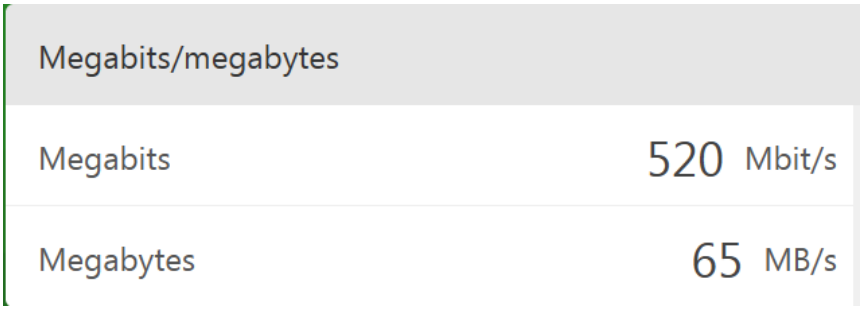
3/13/2023

Spectrum Tech's spent two hours at the house with a meter, deferred my many questions, and got the wireless test results they wanted, mostly not reproducible on my two computers used for testing.

The tech's cheap home personal computer showed results at the provisioning level consistently in Win10/Chrome.

Running the speedtests, @speedtest.net to various locations, hostingsupport.io (my web and email ISP), fast.com, etc. the results were random on both machines, wired and wireless, Win7/Firefox, or Win10/Brave, ranging from sub 200Mbps to 600 plus.

Downloading a 4GB test file from my web server, we both got about 65MBps (520Mbps) wireless and wired. Exactly once.



They mostly would not answer questions about the size of my node and the bandwidth coming to it. They did say that they reproduced the speeds at the TR office at my pedestal and at my incoming line. They did answer to say that a 2.5 Gbps Ethernet port modem would not improve my speeds.

Makes me wonder…I would swear that just like last time two years ago, that while they are here the speeds are reasonably good. After they leave and beyond the speeds degrade. Did they turn something up at the TR office and then call the tech after they left and tell him to turn it back down again?

Additional questions:

Q. Is my node size limited to the approx. 30 subdivision homes, which has expanded from a couple of dozen two years ago?

A. Don't know.

Q. What is the bandwidth from the Two Rivers plant to my access medium (node)? Is it 2Gbps or greater and if so would I be better off with buying a better $200 modem like a Motorola MB8611 with a 2.5 Gbps Ethernet Port?

A. No.

The fact that they told me that they could have 400-500 devices on a node worries me. I do not think they can see anything other than IP addresses and that would mean modems/routers not actually devices. I know they use the router MAC (basically a device serial number) to assign you an IP but I do not think they can see computer MAC's. Unless they can see MAC addresses on their end, I do not know yet.

If you have your own firewall which provides DHCP service and NAT for your devices, your MAC address is not in a DHCP request or router syslog going to the ISP. Having an additional firewall and providing your own Wi-Fi device is actually wise if you are paranoid about your MAC address being logged / tracked.

MAC addresses of an IP packet (actually an Ethernet frame) are overwritten by each router on the course through a routed network (i.e. Internet). Thus, by the time your packet exits your ISP's network, its MAC-address has already been replaced multiple times.

A MAC address has zero meaning outside of a network segment. It can, and is often, duplicated across the whole Internet, so it is very fortunate that it has no meaning outside of a single network segment.

Almost everyone has a home router (typically with cool gizmos like a built-in wireless access point!), so almost no one transmits a frame to their ISP that has the MAC address of any of their personal devices.

As this information is not transmitted across network segments, it is not really possible for anyone to use this as an identifier of any sort. Nobody can track anything by MAC address it simply cannot be used that way.

MAC addresses inside your network, however, are utterly irrelevant outside your network. The only way your ISP can track your MAC address is if you are connected to a router that they provide and manage.

The MAC address of your devices (laptop, tablet, desktop, etc.) does not make it past your router. MAC addresses are not routable. Period. They do not pass through routers.

Preliminary research tells me that nodes are usually a few dozen homes, and that perhaps tracks closer to the 210 devices on the node they told me two years ago.

Will wire the three machines in my office tomorrow with Ethernet, to eliminate the variables of wireless connections. I set the Ethernet port (ASIX AX88179 USB 3.0 to Gigabit Ethernet Adapter) to the max allowed 4k Jumbo Frames and 1Gbps Full Duplex.[9]

Stay tuned…

Also, I will try to setup a tablet computer with Wireshark in promiscuous mode to see if I can capture the data to and from Spectrum.

3/14/2023 Had a nice call from Engineer today who says he is a speed expert there. He suggested that I run some more tests and I told him that after two hours yesterday I am tested out. I also told him that I spent the day running Cat6a cable to my office to get rid of the random flakiness of wireless connections, which when combined with the random flakiness of web based speed tests, make my Spectrum Internet connectivity impossible to troubleshoot.

---

[9] A duplex communication system is a point-to-point system composed of two or more connected devices that can communicate with one another in both directions. There are two types of duplex communication systems: full duplex and half duplex.
In a full-duplex system, both parties can communicate with each other simultaneously. An example of a full-duplex device is plain old telephone service; where the parties a call can speak and be heard by the other party simultaneously, or a wired Ethernet computer network connection.
In a half-duplex, both parties can communicate with each other, but not simultaneously. An example would be a walkie-talkie, or a Wi-Fi wireless networking connection.

I told him that my Internet was down for a few hours this morning and he said that there was noise on the line and the tech determined that circuit boards node were ice covered and he replaced them. He wanted me to speed test to see if it was OK now, and it turns out that it is really not. Am getting 270Mbps-ish at his requested test site of https://www.spectrum.com/Internet/speed-test in Eau Claire.

Although when I download a 4GB file from my webserver in Milwaukee, I get 8MBps ish. This is only 64Mbps. https://tcw.org/downloadtestfile.iso

At this site https://ipv4.download.thinkbroadband.com/1GB.zip I only get 2MBps.

I also told him that I was paying too much for such slow speed. He said that I was getting the Ultra package for free until 4/24, and I said that I was not getting the speed however and that maybe by 2024 I could get fiber. He suggested that perhaps 500/500 might be more realistic. According to at least one guy, fiber may not be all that it is cracked up to be:

ATT PLEASE BURY MY FIBER CABLE!!!
It's the FOURTH time in 2 months (for days at a time)
I've lost Internet connectivity because the techs won't bury my cable, they just TAPE IT ON A BUSY ROAD AND CARS RUN OVER IT AND CUT IT.

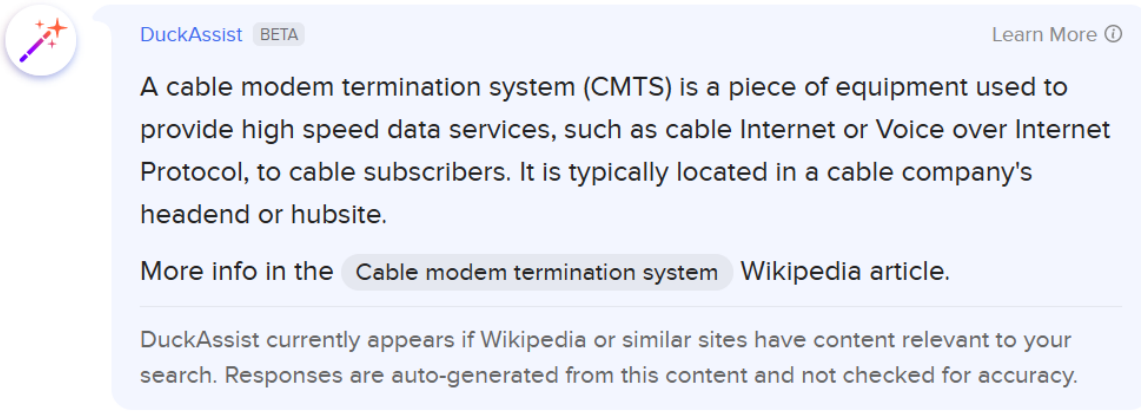
You did what?

Engineer also said that the techs last week split the existing nodes to two separate CMTS servers[10] and he thought that there were 300-400 devices (routers) on my node typically. This depends on the type of fiber cable in the area, geo location, and backhaul capabilities.

According to PCMag, a CMTS performs packet format conversion and IP address assignment (see DHCP). It may also provide routing, bridging, filtering and traffic shaping.

Cisco CMTS server UBR10012

This is what Claude, the Duckduckgo AI, had to say on this subject:



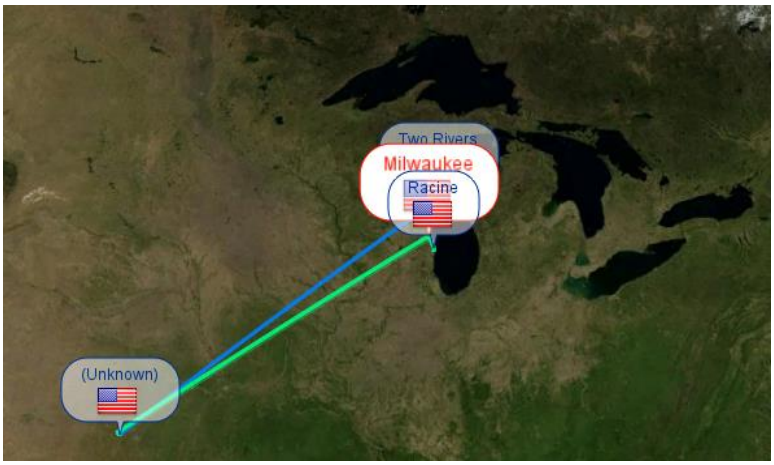
He also offered to send me a new modem, no charge, he said Hitron were bad modems with the Intel Puma chipset The Technicolor and Ubee modems with the Broadcom chipset do not have these problems like DDoS, cable haunt, security problems that caused slow speeds, dropouts, and packet loss. This will have the new 2.5 Gbps Ethernet port, and DOCSIS 4.0 to support symmetrical 500Mbps (up/dn) currently being tested by Charter around the country.

[10] *A cable modem termination system (CMTS) is a component that exchanges digital signals with cable modems on a cable network. The CMTS enables MSOs to manage the connections between their subscribers and the Internet.*

He said that he could not guarantee which one I will get, but he will ship one with a note and installation instructions. So I have a 1 in 4 chance of getting the bad one.

He will call back again on 3/19 after I have had some time to test and wire two more computers with Ethernet in my office.

An interesting thing that I noticed today, i.e. since my TR Node 1FU22 setup was changed. I have been told of subsequent noise errors at the 200 Norwood Dr. node and the County Road "R" amplifier.

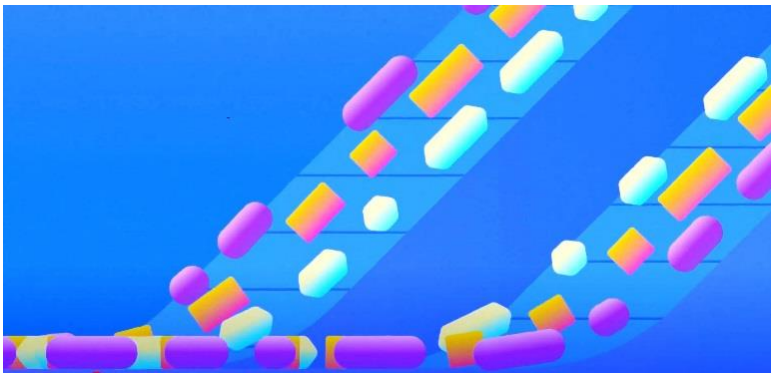


My packets to my ISP no longer travel to Reston, VA

Router misconfiguration in Charter datacenter sending packets to Reston?

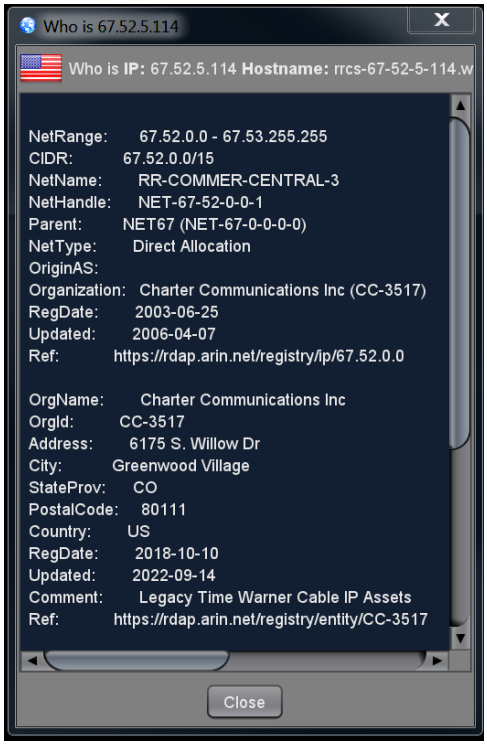
#		Country	Town	Lat	Lon	IP	Hostname
1		United States	Two Rivers	44.166	-87.5832	192.168.1.1	(None)
2		*	*	44.166	-87.5832	*	*
3		United States	(Unknown)	37.751	-97.822	96.34.25.20	lag-62-10.dtr01twrvwi.netops.chart...
4		United States	(Unknown)	37.751	-97.822	96.34.30.25	lag-204.crr01stptwi.netops.charter....
5		United States	(Unknown)	37.751	-97.822	65.29.45.255	lag-9.mcr01stptwibx.netops.charter...
6		United States	(Unknown)	37.751	-97.822	65.29.45.5	lag-103.mcr01fdulwign.netops.cha...
7		United States	(Unknown)	37.751	-97.822	65.29.44.217	lag-102.mcr01milzwift.netops.chart...
8		United States	(Unknown)	37.751	-97.822	76.58.45.185	076-058-045-185.inf.spectrum.com
9		United States	(Unknown)	37.751	-97.822	65.189.180.243	(None)
10		United States	Milwaukee	43.067	-87.9682	67.52.5.114	rrcs-67-52-5-114.west.biz.rr.com
11		United States	Racine	42.7712	-87.7984	66.185.29.222	static.66.185.29.222.cyberlynk.net
12		United States	Racine	42.7712	-87.7984	66.185.30.186	blackbird.a2u2.com

Twelve hops to my ISP



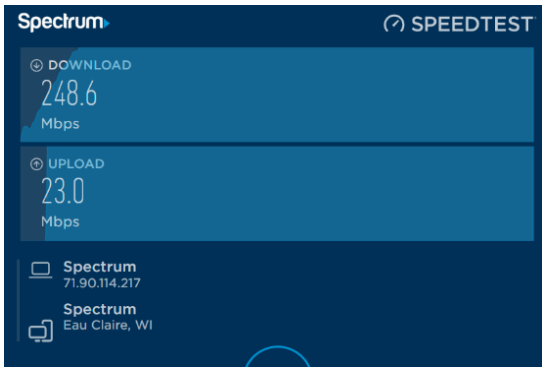
Where are my packets wandering to?[11]

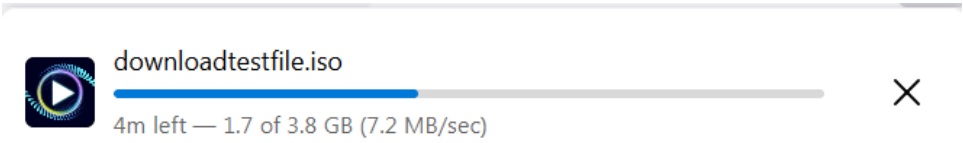
[11] *In telecommunications and computer networking, a network packet is a formatted unit of data carried by a packet-switched network. A packet consists of control information and user data; Wikipedia*



My packets briefly visit Greenwood Village, Colorado and then routed to my ISP

Some further testing on 3/15/2023 shows:



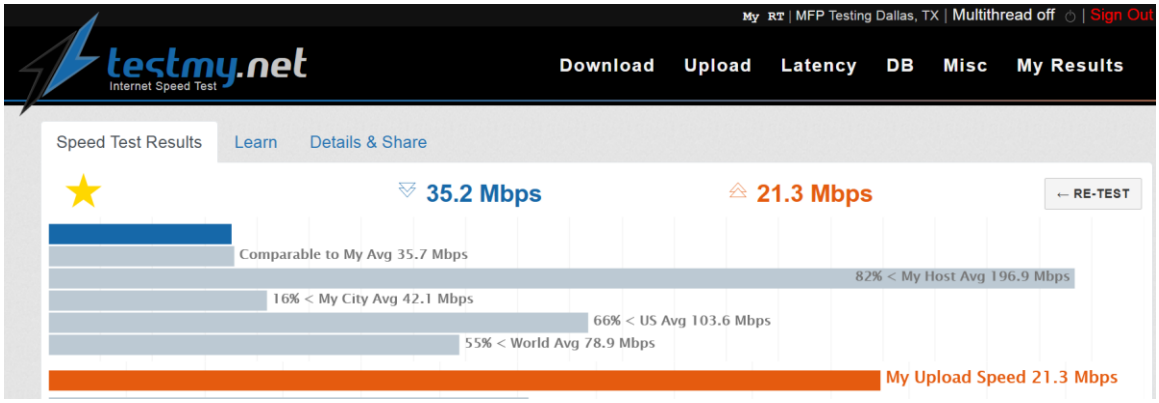


7.2MBps in Firefox from my webserver or in Spectrum talk, 57.6Mbps

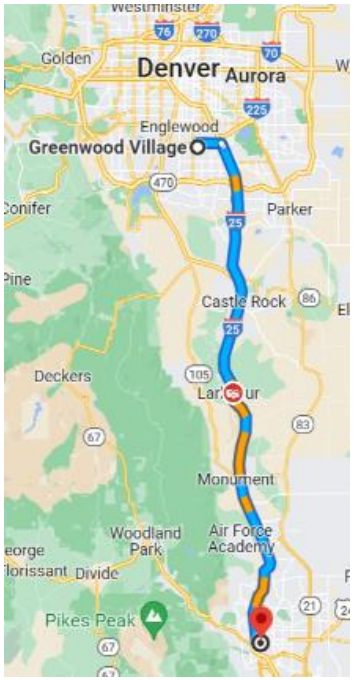
(A long way from the Promised Land of 500Mbps)

So let us not trust my webserver, although it provided 65MBps on my test file a couple of days ago. Exactly once!

So let us try this one: https://testmy.net/download. Set the server to the closet one to here, Colorado Springs, CO and the download to a 1GB file. Also about 1100 miles from the Spectrum datacenter in my traceroute.



So that looks pretty bad, huh?



Only about sixty miles.

6175 S. Willow Dr, Greenwood Village, CO, 80111

This is what their website says:

TMN is a TRUE speed test, plain and simple

Some ISPs question the legitimacy of many Internet speed testing sites, as they should, most of them aren't very good. At TestMy.net we are obsessed about accuracy. We have over 26 years of experience testing the World's Internet. TestMy.net's servers are on a network that has direct peering with some of the biggest names in the Internet backbone.

With multi-homed connectivity and bandwidth from over 25 independent Tier 1 carriers including Comcast, Cox, Time Warner, Charter, Qwest, Google, Level 3, Internap, NTT America, Equinix & Telefónica to name a few. The network has a total capacity of over 2000 Gbps and our servers have multiple gigabit uplinks into that network. TestMy is always overstocked with bandwidth and can meet the needs of even the most demanding connections. Our servers are also configured and tested to maintain full quality of service for thousands of miles.

Powerful bandwidth makes a powerful speed test

TestMy.net is an independent third party and is not affiliated with your Internet service provider. Our results are unbiased because TMN has no vested interest in the outcome of your speed test. We work for the Internet consumers not the Internet providers. For this reason our servers are hosted outside of all provider networks, in locations where the websites you visit are hosted. Our bandwidth providers are the biggest names in the industry and our servers are hosted directly on some of the largest trunks that make up the Internet. **Your ISP should be able to deliver clean, useable bandwidth to these common areas of the Internet.**

Total network bandwidth capacity in excess of 2000 Gbps

TestMy.net's servers are all gigabit or multi-gigabit uplinked

Hosted network features multi-homed connectivity with bandwidth from independent Tier 1 carriers, combining multiple 10 Gbps connections to create one of the industry's fastest networks.

Global network reach utilizing over 25 Tier 1 network providers including Comcast, Cox, Time Warner, Charter, Qwest, Google, Level 3, Internap, NTT America, Equinix & Telefónica to name a few

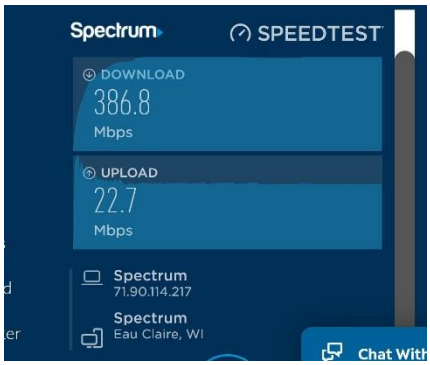
Extensive peering relationships across North America, Europe and Asia

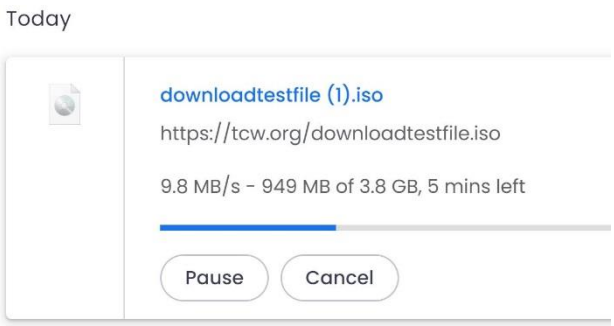
So I then setup an automatic test to run every 12 hours day 5 times. This certainly beats having to keep doing speed tests manually.

Meanwhile while I am doing this testing, two dozen turkeys break up a small bird and squirrel gathering and have their own party in my backyard. The deer want in on it too.

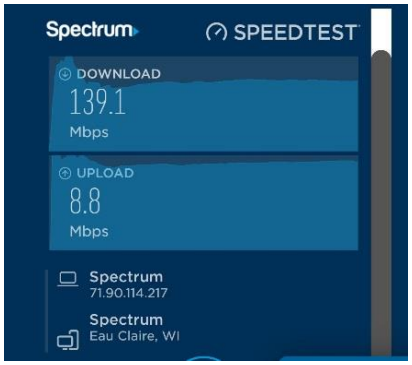
Then I decided to do some further testing with a Surface Pro 7+ using a 2.5 Gbps Ethernet adapter off of the USB C 10Gbps port with a 10Gps Cat6 cable to the 1Gbps port on the router. I set the Ethernet adapter to Jumbo Frames (16128 bytes) and forced 2.5 Gbps Full Duplex.

The results were:





From https://www.spectrum.com/Internet/speed-test and https://tcw.org/downloadtestfile.iso



Meanwhile 20 feet line of site from the router, on the same computer, a Wi-Fi 6ax connection can look like this.

Then I decided to run speedtest.exe, a Windows application that keeps track of your manual tests and will output them into a CSV file. So I will run that for a few days and feed that data back to Engineer at Spectrum.

So I got an email today from Spectrum telling me that they shipped my new modem. A bit disappointed that it is not DOCSIS 4.0 but it should still work fine. We shall soon see.

Equipment Shipped: D3.1 2.5G WIRED EMTA
BASIC MODEM INFORMATION
Example of Cable RF
MAC Address 00:71:CC:8E:54:C7
Firmware Version 14.1.2xxx
Compatibility DOCSIS 3.1/3.0/2.0/1.0 certified Ethernet
10/100/1000 Mbps
Local Web User Interface Access
http://192.168.100.1
Modem Web Page Login (web user interface)
Login: technician
Password: C0nf1gur3Ubee#
https://d15yx0mnc9teae.cloudfront.net/sites/default/files/Spectrum D3_1 eMTA QIG_manual.pdf

Note: current DOCSIS 3.1 cable modems support capacities up to 5 Gbps downstream and 1.5 Gbps upstream, while DOCSIS 4.0 cable modems will support capacities up to 10 Gbps downstream and 6 Gbps upstream.

So in theory, I might be able to access the web interface of this modem and see the data ingress and egress just like Spectrum can do remotely. Stay tuned…

Am getting pretty sick of testing now. Why can't I just get what they promise? Remember, LiMu Emu & Doug say to pay for only what you *need*! Great words of wisdom.

Eight days a week of testing. Sounds like a song lyric. But no, I must resist turning this old Ringo malapropism into a song!

Eight days a week of testing
But I'm retired and should be resting
Writing my books and crafting it's stories
About a guy named Lefty and his role in his-tory
Cause I am here in the winter buried in snow
Trying to discover what makes my Internet so slow
The techs say to test local
They must think that I am some yokel
My connections have a distance
Not where their tests have their best chance
Cause I am here in the winter buried in snow
Trying to discover what makes my Internet so slow
Am doing what I need to, to try to make it go
But to Spectrum Internet, I am just some Joe Blow
I will continue to write because it's what I know
Persistence will pay off for those who don't know
Cause I am here in the winter buried in snow
Trying to discover what makes my Internet so slow
I should be taking it easy after a life of hard work
Not explaining to some clueless Spectrum millennial jerk
I should be watching tech podcasts or streaming movies and shows
But NOOOOOOOO!
Cause I am here in the winter buried in snow
Trying to discover what makes my Internet so slow

No, no, must not go there. I guess it's too late now.

3/16/2023

FedEx delivered the modem today. Bad luck, I got a Hitron. It looks exactly like the Technicolor or Ubee with no external identification other than Spectrum. The only way to know is the product sticker on the box. Hitron EN 2251 PC15. I will need to do some research before I decide to use it. Looking at the back, you see this:

On Reddit r/Spectrum:
SunFit8425· 1 yr. ago
Spectrum is upgrading their network to be 3.1 only in certain markets. Since they sent you a modem, your market is one of them. DOCSIS 3.1 is more efficient and relieves congestion on their end; at your speed, you will not notice a change, except for possibly a more stable connection if your node is already congested.
Sirbruce ·
1 yr. ago
The backwards compatibility is for the modem, not the network. In other, a DOCSIS 3.1 modem will work on a DOCSIS 3.0 network. But, once Spectrum upgrades their network entirely to DOCSIS 3.1, a DOCSIS 3.0 modem will not work for it.
Final Note: As DOCSIS 3.1 relies on different frequencies than DOCSIS 3.0, it is possible you may have service instability after switching to 3.1 that you did not have 3.0. If you run into problems, you should contact support, have them do their testing, and if need be they can send a tech out to fix any Spectrum-caused issues.
jpblanch75·2 yr. ago
I have seen numerous issues with the EN2251 but sometimes it works just fine. The ET2251 and EU2251 are better options. These models are the latest with 2.5G Ethernet ports usually kept for gig service
Stonewalled9999 2 yr. ago
Meh, an ENB2251 is Puma7. Not great but not as terrible as the Puma6 where there is a lawsuit in the works.
The Hitron's EN2251 uses a different chipset than the Technic color ET2251 and the Ubee EU2251. The ET2251 and the EU2251 use the same Broadcom chipset as the Netgear CM2000 modem. Try to swap it out for an ET2251 if you can!
EU2251 - Ubee D3.0 32x8 D3.1 2x2 Modem/eMTA 2.5 Gbps WAN port-
EN2251 - Hitron D3.0 32x8 D3.1 2x2 Modem/eMTA 2.5 Gbps WAN port *** PUMA7 Chipset-
ET2251 - Technicolor D3.0 32x8 D3.1 2x2 Modem/eMTA 2.5 Gbps WAN port

Dslreports.com
To H8ff0000
Puma7 does have some issues but they aren't nearly as bad as the Puma6 ones, and you probably should try it first to see if any of them actually affect you.
Puma6 is a different story, the underlying chipset is clearly just too underpowered to handle what it needs to, and it leads to very obvious performance issues for way more use cases. Hitron's 2251's don't have as much of problem in nodes with ingress.
The Hitron model has the Puma 7 chipset which still has some of the issues found in the Puma 6 chipset.

So the net, net here appears to be that the Puma 7 Hitron is somewhat better than the Puma 6 version but your mileage will vary so go ahead and try it and see what happens.

In reading the docs on the EN2251-RES (residential includes voice) it says that it supports speeds up to 1.97Gbps with the 2.5GigE port with two bonded downstream channels over it DOCSIS 3.1 interface. So I need a router that allows this port bonding or port aggregation[12]. Mine does not appear to support it.

Does not matter for now, because they limit me to 500Gbps for now anyway, yet I want 2Gbps fiber to my house.

---

[12] *WAN aggregation combines multiple network connections from your modem to your router. An aggregated WAN connection provides seamless connectivity and the maximum possible Internet speed to your home network. WAN aggregation might be useful if you have a multi-gig Internet connection but your modem does not have a Multi-Gig Ethernet or 2.5G Multi-Gig Ethernet port.*

I will wait for this round of testing to be complete in the next few days, and then roll the dice on this.

3/19/2023 Update

Engineer instructed me that since this was a Hitron modem that was shipped to me, not to install it. So, not much confidence there. Meanwhile I sent him my preliminary test results. Of course I copied in the whole C-suite again, the Tech Support guys, my data ISP, and the local media.

From: Lefty [mailto: lefty@tcw.org]
Sent: Monday, March 27, 2023 7:37 AM
To: 'SPECTRUMCHATSUPPORTENGINEERS@CHARTER.COM'
Subject: My Speedtest-Part Two

Engineer et al,
Spectrum Chat Support Engineer,
3/16/2023
FedEx delivered the modem today. Bad luck, I got the Hitron. It looks exactly like the Technicolor or Ubee with no external identification other than Spectrum. The only way to know is the product sticker on the box. Hitron EN 2251 PC15.
Historically Hitron were bad modems with the underperforming Intel Puma 6 chipset The Technicolor and Ubee modems with the Broadcom chipset do not have these problems like DDoS, cable haunt, and security problems that caused slow speeds, dropouts, and packet loss.
At least this one has the Intel Puma 7 chipset, which retains some of these issues according to my research, and am bit disappointed that it is not DOCSIS 4.0 but it should still work fine. It does have the new 2.5 Gbps Ethernet port, so I've got that going for me…which is nice.

So after the last extensive message, I want to simplify this round of testing. The only variable will be a possible new modem.
I want to look at the bandwidth/data traffic ingress and egress at the modem/router.
Internet Traffic Monitoring History
Bandwidth Monitoring History
SNMP modem data

Spectrum Modem, Netgear Router, and APC UPS

So the Spectrum tech showed up this morning, this time from Sturgeon Bay and not Two Rivers because all the techs there quit, got hurt on the job, or otherwise moved on apparently.
His meter said that the modem capable of 2Gbps provisioned for 400Mbps and showed 537 devices on my node. Tech support had previously told me that my connection was provisioned for 570Mbps. unfortunately he only had Hitron and Sercomm modems on his truck. So much for Engineer telling me that they, Spectrum, were trying to rid the world of these Hitron things, and him not wanting me to us the one I was shipped.

He saw on four of my machines how random, and mostly slow, my Internet connections were. He then swapped out my Technicolor DOCSIS 3.0, 1Gbps modem with one he had in the truck, a Sercomm DOC 3.1, 2.5 Gbps model (Intel Puma 7 chipset) and the connection instantly turned to shit. Download speeds ranged from 1.7Mbps to 10Mbps.
Got Engineer on the phone and they, and the NetOps people worked through some stuff, and Dom replaced the coax cable from the pedestal to the house, because it is twenty years old and might have ice and water in it. This had no effect, nor did taking the resistor out of the line.
So he put the original modem back in and it came back to where it was when he got here, three hours earlier.
This appears to be some kind of a Charter backend provisioning problem.
Stay tuned.
Lefty

From: Lefty [mailto: lefty@tcw.org]
Sent: Sunday, March 19, 2023 12:02 PM
To: spectrumchatsupportengineers@charter.com
Subject: Speed Test DONE!
Engineer,
Ok, so remember that it was not just my IP that has changed, but also the modem.
Also, I have become dubious like you (despite their language and promises) of the results below, as I can now test to the Comcast in Chicago and Denver speed test servers with pretty good results.
Btw, removing Zone Alarm also fixed Computer Three. Now only Computer Two is left to fix…
Thanks again to you and your NetOps people, who humored me,
Lefty
PPS. I found this guy on the Netgear Community Forum and am envious.
"I have a CM2000 (has a 2.5gig port) running to my RBKE963 which then goes to an 8 port 2.5gig switch, then to 2x custom pc's that one has a 2.5gig port and the other a 2.5/5/10gig port. I get 1.4gig download/50mbps upload from Xfinity"
He must be somewhere on the East Coast. Sigh.

From: TestMy.net Test Monitor [mailto:monitor@testmy.net]
Sent: Sunday, March 26, 2023 1:00 PM
To: lefty@tcw.org
Subject: Speed Test DONE!
Hi Lefty, Here's your last speed test result on Spectrum.
350.8 Mbps Down :: 32.5 Mbps Up
- TestMy.net

From: Lefty [mailto: lefty@tcw.org]
Sent: Sunday, March 19, 2023 12:02 PM
To: spectrumchatsupportengineers@charter.com
Cc: Tech Supvr. Mgr@charter.com; Tech Supvr@charter.com; <escallation@charter.com>; SVC_CCEDCharter@charter.com; abuse@charter.com; Tech One@charter.com; Tech Mgr@charter.com
Bcc: ' ExecAssist@charter.com'; 'ExecVP@charter.com'; 'COO@charter.com'; 'CTO@charter.com'; 'ExecVP-NetOps@charter.com'; 'SVP@charter.com'; ''; 'Reporter' <reporter@jrn.com>; Reid, Brandon <breid@manitowoc.gannett.com>; 'support@cyberlynk.net'

Subject: My Speedtest and TMN Results
Hi Engineer et al,
Spectrum Chat Support Engineer,
This message is formatted in html, so for best readability, read it that way.
I am sharing my prelim test results from the Ookla speedtest.exe software connected to the Speedtest server at CyberLynk in Milwaukee, (Franklin datacenter) where my email server and webserver are housed. This software will keep track of all tests and output them to a .csv file, which I have converted to an Excel file and attached as my speedtest results.xlsx.

1. This data is from an HP Elitebook 8740w-One, Windows 7, Intel 82577LM Gigabit Network Connection. I noticed that I just got this from an open source GitHub utility called Traffic Monitor, on the download test file:

And a snapshot of Speed test results to a CyberLynk speed test server:
But again, this is a dedicated Speedtest server and not an actual working webserver or email server on the Internet, and yet below provisioned and advertised speeds. See attached.
The command line version is attached and the Windows version is a 53MB download, speedtestbyookla_x64.msi

.

2. Then there is HP Elitebook 8740w-Two, (an almost identical)Windows 7, Intel 82577LM Gigabit Network Connection set as default w/o Jumbo Frames and with auto negotiate duplex.
169.18 down, 22.91 up, and 31 ms ping.
Then with the Ethernet adaptor configured to 4k Jumbo Frames and 1.0 Gbps Full Duplex forced. Network connection disabled and re-enabled. Speedtest program closed and reopened.
246.60 down, 23.0 up, and 21 ms ping.
I turned ZoneAlarm off and retested and the result was worse:
182.28 down, 22.44 up, and 27 ms
The tech and I saw this same behavior on my Ethernet connected Surface tablet when they were here testing. It does not seem like a fluke at this point.
See My Speedtest Results_two.xlsx for these results.
3. Then there is my desktop tower, Intel Core I7 3.3GHz, 64GB, Win7 machine, with Intel 82579LM Gigabit Network Connection Ethernet PCI-E adaptor configured to 9k Jumbo Frames and 1.0 Gbps Full Duplex forced. All network power management turned OFF.
See My Speedtest Results_three.xlsx for these results.
All three of these were connected to my Netgear RX1000 router 1Gbps switch port with a 50 ft. Cat6a cable via a 1Gbps switch and 20ft. Cat6a patch cables to each machine. Network maps in previous emails.
The maximum transmission unit (MTU)[13] size on my router is set to the maximum of 1500 bytes.
Note: I did also notice since you split my node that my traceroute no longer shows a hop to and from to Reston, VA. Was this a router misconfiguration at TR, WI or WLV, CO?

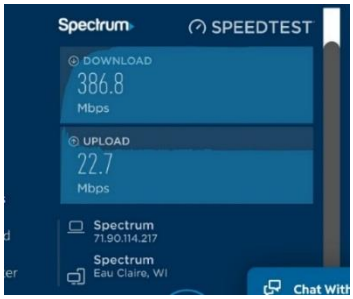
[13] *The maximum transmission unit (MTU) is the largest data packet a network device transmits. When one network device communicates across the Internet with another, the data packets travel through many devices along the way. If a device in the data path uses a lower maximum transmission unit (MTU) setting than the other devices, the data packets must be split or "fragmented" to accommodate the device with the smallest MTU.*

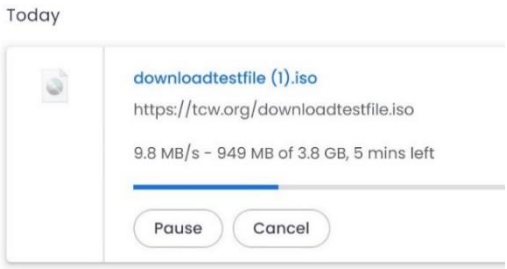
My results from your SPECTRUMNET server in Eau Claire look like this:

I did this testing with a Windows 10 Surface Pro 7+ using a 2.5 Gbps Ethernet adapter off the USB C 10Gbps port with a 10Gps Cat6 cable to the 1Gbps port on the router. I set the Ethernet adapter to Jumbo Frames (16128 bytes) and forced 2.5 Gbps Full Duplex.

The results were:

From https://www.spectrum.com/internet/speed-test and https://tcw.org/downloadtestfile.iso





I am also sharing my test results from the TMN speed test. Visit https://testmy.net/quickstats/ to query my stats. They are 2 Star and 50% below the hosting average for my location.
See attached screenshots for more info.

Shared Test Details:
:::.. Internet Speed Test Result Details ..:::
Download Connection Speed:: 35238.1 kbps or 35.2 Mbps Download Speed Test Size:: 200 MB or 204800 kB or 209715200 bytes Download Binary File Transfer Speed:: 4405 kB/s or 4.4 MB/s Upload Connection Speed:: 21325 kbps or 21.3 Mbps Upload Speed Test Size:: 100 MB or 102400 kB or 104857600 bytes Upload Binary File Transfer Speed:: 2666 kB/s or 2.7 MB/s
Timed:: Download: 47.611 seconds | Upload: 39.338 seconds Tested At:: https://TestMy.net Test Time:: 2023-03-15 09:27:23 Local Time Client Location:: Two Rivers, WI US
https://testmy.net/city/two_rivers_wi
Target:: Dallas, TX https://testmy.net/multithread
Validation:: https://testmy.net/db/vVgYgzqEI.eLDsumqT_
TiP Measurement Summary (Download):: Min 33.68 Mbps | Middle Avg 35.31 Mbps | Max 36.77 Mbps | 9% Variance Client Stats::https://testmy.net/compID/659364295082
User Agent:: Mozilla/5.0 (Windows NT 6.1; Win64; x64; rv:109.0) Gecko/20100101 Firefox/110.0 [!]

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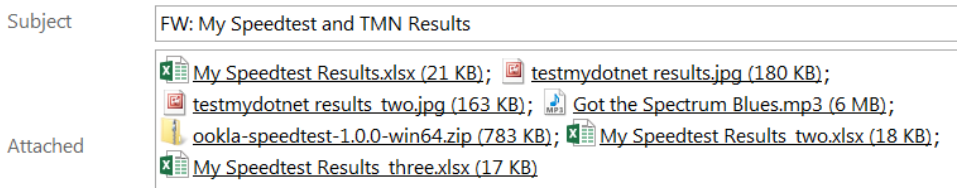
Last night I was downloading some free pdf books from Project Guttenberg.org with my Surface tablet and it was really slow. Now granted that is probably not a top of the line webserver, but I did a speed test to see if it was me. And it was 20 feet line of site from the router, on a Wi-Fi 6ax connection.

And then there is this:
FYI,
Are claimed Internet speeds reasonably substantiated?
Fiber and cable Internet have the biggest gap – with most people getting, on average, about 55% of the speeds they pay for:
https://www.allconnect.com/blog/advertised-vs-actual-internet-speeds

I know that this is a lot to take in, (I have ten machines and you are only seeing results from four) so take some time, listen to my song, and chew on it, or pass it around and let me know what you think.

"I have a slow Internet connection
The speed is all over the spectrum
When it is good, it is very good
When it is bad, it makes me apoplectic"



http://www.tcw.org/My Speedtest Results.pdf
http://www.tcw.org/My Speedtest Results_two.pdf
http://www.tcw.org/My Speedtest Results_three.pdf

Long story short, LiMu Emu and Doug say to pay for only what you need. But after paying Spectrum more, I cannot even get their promised speed. Lefty

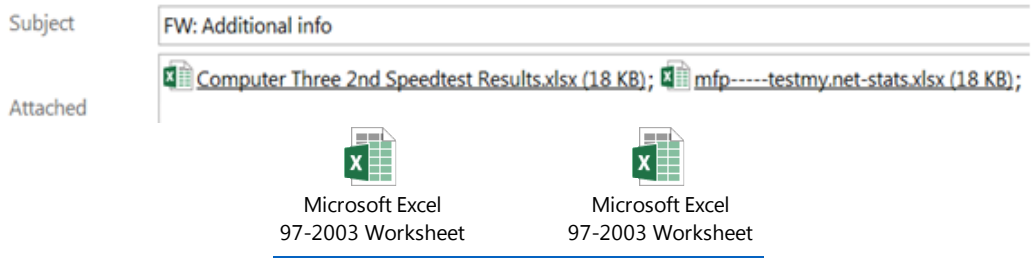
From: Lefty [mailto: lefty@tcw.org]
Sent: Monday, March 20, 2023 7:32 AM
To: 'spectrumchatsupportengineers@charter.com' <spectrumchatsupportengineers@charter.com>
Subject: Additional info
Engineer,
Here is something I failed to fully realize and mention in all the hubbub of my testing:

HP Elitebook 8740w-**One**, is an Intel Core I7-840qm 1.86 32GB, Windows 7, with ASIX AX88179 USB 3.0 to Gigabit Ethernet Adapter XRP 3 Three Port Hidden Inside USB 3.0 USB3.0 HUB to Express Card Express Card 54 54mm Adapter Converter Card Fresco Logic Chipset FL1100 **5.0Gbps**

HP Elitebook 8740w-**Two** is an Intel Core I7-740qm 1.73 32GB, Windows 7 with ASIX AX88179 USB 3.0 to Gigabit Ethernet Adapter XRP 3 Three Port Hidden Inside USB 3.0 USB3.0 HUB to Express Card Express Card 54 54mm Adapter Converter Card Fresco Logic Chipset FL1100 **5.0Gbps**

The CPU should not matter but the network adaptor is apparently making a difference of about 150Mbps. Only further testing will tell for sure.
I have also attached some additional data. Lefty

PPS. FYI, in the attachments I sent you previously was the speedtest.exe in a zip file. This email was rejected from CyberLynk.net, garnett.com, and rjn.com because they apparently do some deep packet inspection that Charter.com does not do at the email network level. I have never seen this before as I have routinely package exe's in zip files over the years.



http://www.tcw.org/Computer Two 2nd Speedtest Results.pdf

http://www.tcw.org/testmy.net-stats.pdf

So the Spectrum tech showed up this morning, this time from Sturgeon Bay and not Two Rivers because all the techs quit, were hurt on the job, or otherwise moved on.

His meter the modem capable of 2Gbps provisioned for 400Mbps and showed 537 devices on my node. Tech support had previously told me that my connection was provisioned for 570Mbps. Unfortunately he only had Hitron and Sercomm modems on his truck. So much for Engineer telling me that they, Spectrum, were trying to rid the world of these Hitron things, and him not wanting me to us the one I was shipped.

He saw on four of my machines how random, and mostly slow, my Internet connections were. He then swapped out my Technicolor DOCSIS 3.0, 1Gbps modem with one he had in the truck, a Sercomm DOC 3.1, 2.5 Gbps model (Intel Puma 7 chipset) and the connection instantly turned to shit. Download speeds ranged from 1.7Mbps to 10Mbps.

Got Engineer on the phone and they, and the NetOps people worked through some stuff, and Dom replaced the coax cable from the pedestal to the house, because it is twenty years old and might have ice and water in it. This had no effect, nor did taking the resistor out of the line.

So he put the original modem back in and it came back to where it was when he got here, three hours earlier.

This appears to be some kind of a Charter backend provisioning problem.

Stay tuned.

From: Lefty [mailto: lefty@tcw.org]
Sent: Monday, March 20, 2023 4:53 PM
To: 'spectrumchatsupportengineers@charter.com'
Subject: More info
Engineer,
I am sorry that I was not able to properly answer your question on firewalls.
I am retired IT so these computers have nothing weird on them.
MSOffice 2013, FTP software, Firefox or Brave browsers (some with one or the other, some with both) but I do not know of anything that would mess with TCP/IP.
Besides the results from speedtest.exe and from browser based speed tests show the same randomness of speeds.

Anyway, here is the scoop:

1. **Computer One laptop has the standard Windows AV and Firewall, Microsoft Security Essentials (MSE)**
2. **Computer Two laptop has ZoneAlarm firewall and MSE for AV**
3. **Computer Three has ZoneAlarm firewall and MSE for AV. The only variation this this one but this is the one I got the 554.73Mbps reading on.**
4. **NUC has the standard Windows AV and Firewall, Microsoft Security Essentials (MSE)**

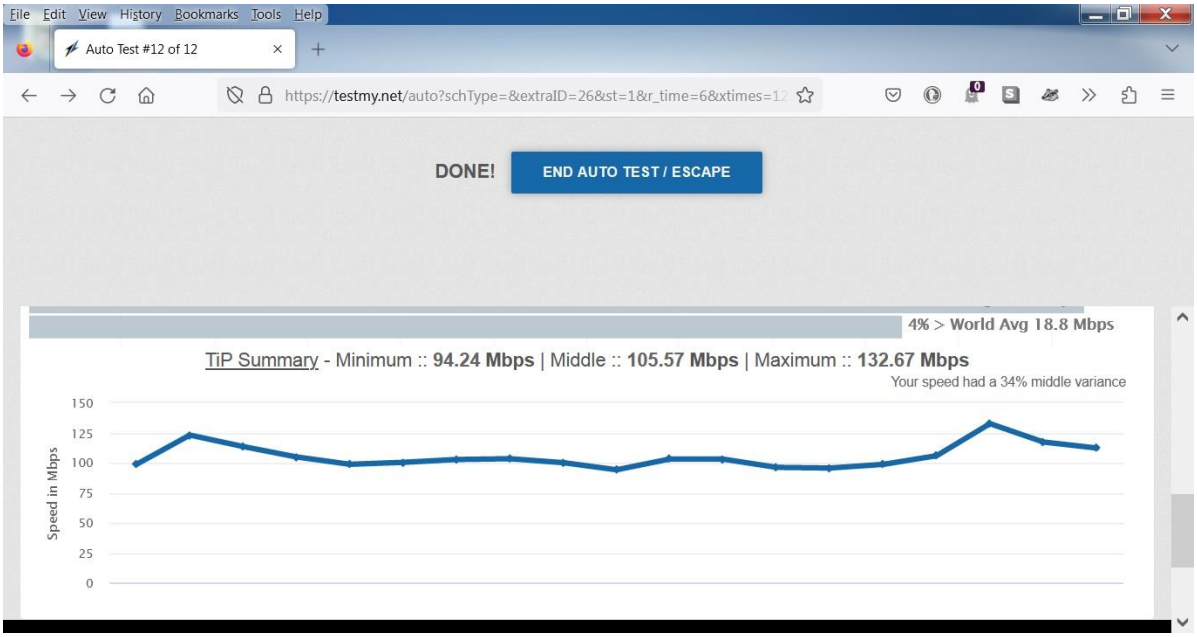
5. **Surface tablet has ZoneAlarm firewall and AV. I turned them both off for the test.**

I turned them both off for a test right now and got 480Mbps down both on and off.
I can connect another two tablets and a desktop to Ethernet testing with some effort, but I do not see the point, at this point.
I can run a series of tests with ZA on an off, by my preliminary testing (twice) shows that it makes no difference.
Your tech saw this first hand but was not interested.
Or I can even uninstall it if I believe it is worth the effort.

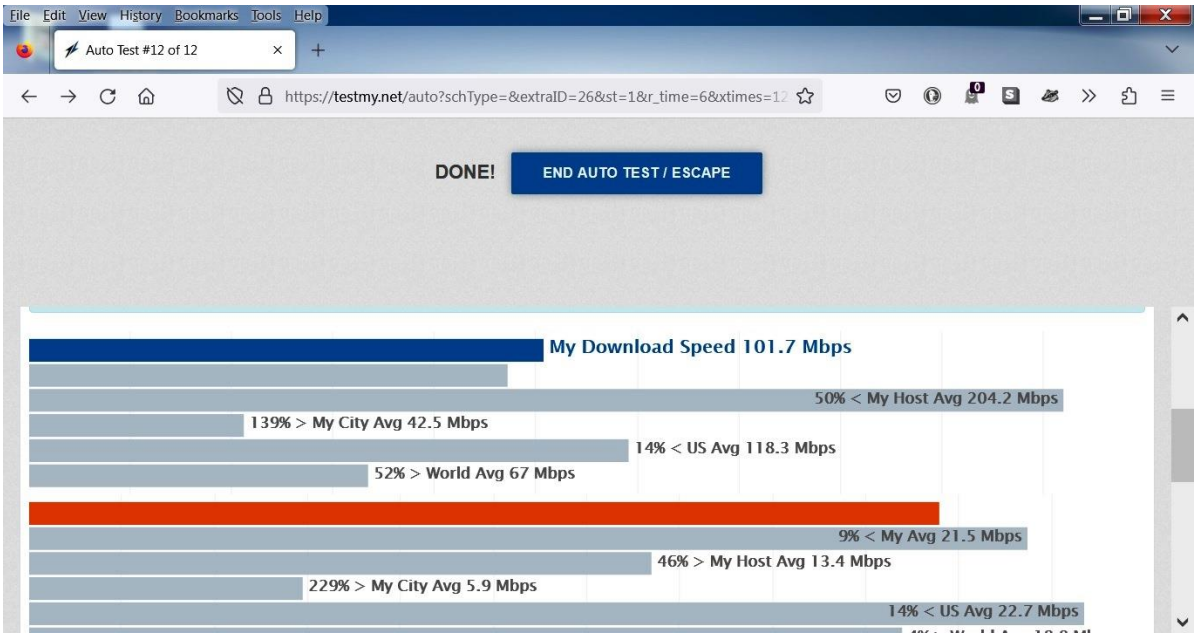
6. **Samsung tablet has ZoneAlarm firewall and AV. I turned them both off for the test.**

OK, just had another idea. The Samsung tablet I used for the testmy.net tests is still connected to the Ethernet but off. From the Spectrum.com/speedtest site, it shows right now 378 down and 23 up.
The NUC sitting right next to it shows 462 down and 22 up in a test immediately after, at the Milwaukee CyberLynk site.
Hey, I have an idea, I you insist on trying a laptop here, make sure it has Ethernet and give Dom a PO to pick one up for use here and elsewhere. I am good at spending other people money.
He seems to be the last man standing in this area, so give him the tools he needs to do his job. He is quite computer literate for a millennial in my view.
This randomness is driving me crazy and there is nothing in my 30 years of experience that tells me that AV or ZA could cause this. Think of Occam's razor.
What I did see however, is that your database on this particular installation and provisioning is messed up. The provisioning specs told to me varies from 400-570Mbps and this new DOCSIS 3.1, 2.5 Gbps Hitron modem crashed your system. It could be a bad modem, but you were not inclined to try another.
I recall also that you were insistent that I do not install it.

I need you to stop thinking like a TWC TV cable provider reading line noise in hertz and decibels, and start thinking like an Internet provider and measure bandwidth and data transfer rates from SNMP feeds.



Everything to me, points to backend problems from you, which may or not be easily fixed.
Lefty



From: Lefty [mailto: lefty@tcw.org]
Sent: Tuesday, March 21, 2023 10:05 AM
To: spectrumchatsupportengineers@charter.com
Subject: Charter/Spectrum and me
Engineer,
As you have probably have noticed, despite having a sense of humor, I am fully aware that I am very direct in my speech and writing. A remnant from my German heritage, the ugliness I have seen in the world, my general nature, and work background, I suspect.
I also tend to be very focused, logical, systematic, and persistent in my actions, a remnant of my entrepreneurial career I suspect. Perhaps single minded is the correct term. In my life, I have created from nothing and run two small businesses for 20 years, and doing whatever it took to make that happen.
I also tend to take people at face value, and give the benefit of the doubt until this is proven to be the wrong approach.
That said, despite your words of assurance that you _*will*_ resolve this problem physically, I now get the impression that you, and/or those you work for, have decided to try to fix this with me mentally.

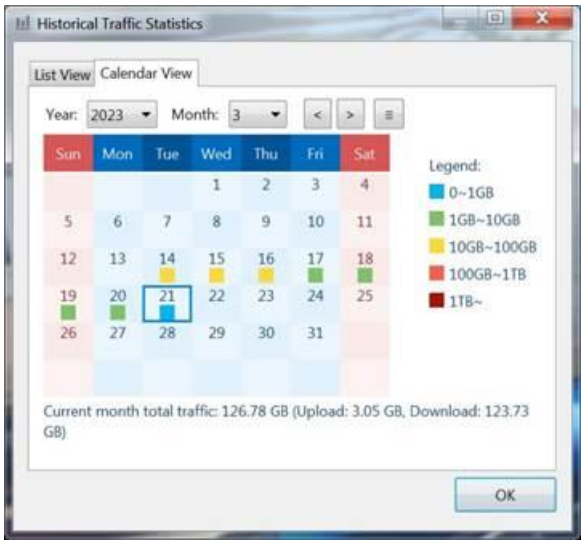
I say this in part since you seem to lend no credence to the preponderance of data I have sent you. I do not believe you are taking this data seriously, or perhaps even reading it, and I have to ask myself why. What are your real motivations here?
You keep talking to me in cable TV terms of hertz and decibels and I talk to you in terms of Internet ISP packet speed and packet volume.
The new modem crashed your system and it makes me wonder if this node can even support DOCSIS 3.1 and a 2Gbps device.
You say that this node is not oversubscribed at 500 devices, despite the Charter history of routinely doing exactly that.
You said that you are willing to fix any bad taps and add amplifiers to give me *consistent provisioned speed*, but are you willing to order the reengineering of this node to consistently meet your advertised speed? Will you ship to me or install a new Technicolor or Ubee modem?
If you really need to send a tech out here again, can you send a knowledgeable and personable tech like Tech Mgr. along with the tech to do it?

Some of what has occurred here seems delusional to me:

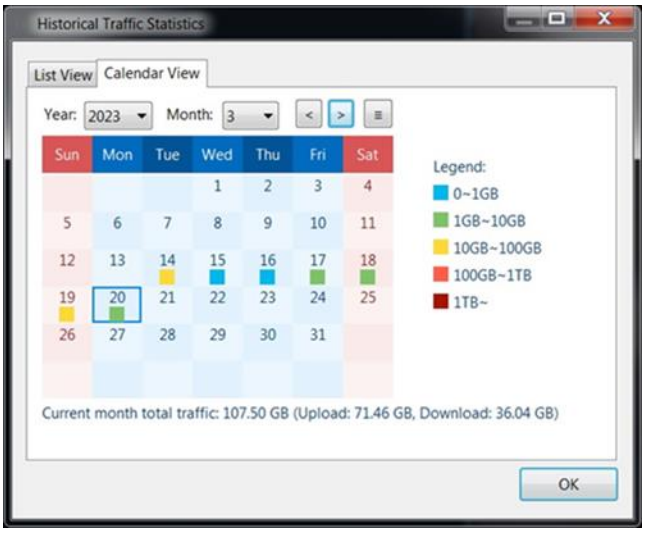
1. Like not using my router or believing the results, while pronouncing my connection good based on wireless readings from this very same router. This was also done two years ago by your Tech Mgr./Marketer.
2. Like insisting on plugging into the modem, while he pronounces my connection good, by using a wireless laptop. He has very limited technical knowledge.
3. Like trying to tell a technologist like myself, that a software firewall is impacting my results always, while clearly seeing from the data I send that this cannot possibly be logically true.

In a last gasp effort, I am including screen shots of both bandwidth and traffic on two computers, as I do not yet have access to SNMP data from the router or modem.

Bandwidth stats Computer One			
Date	Download	Date	Download
Mar/21/2023 8:01	449	Mar/17/2023 22:49	440
Mar/20/2023 17:27	345	Mar/17/2023 14:42	393
Mar/20/2023 17:08	391	Mar/17/2023 13:28	363
Mar/20/2023 16:11	378	Mar/17/2023 12:29	444
Mar/20/2023 12:58	398	Mar/17/2023 7:40	455
Mar/20/2023 10:25	279		
Mar/20/2023 7:41	441		
Average	**383**	**Average**	**419**
Mar/19/2023 16:05	440	Mar/16/2023 19:09	412
Mar/19/2023 10:37	457	Mar/16/2023 17:32	358
Mar/19/2023 6:28	442	Mar/16/2023 15:49	387
Mar/19/2023 5:07	317	Mar/16/2023 8:39	442
Mar/19/2023 3:39	455		
Average	**422**	**Average**	**400**
Mar/18/2023 13:45	329	Mar/15/2023 20:51	425
Mar/18/2023 10:42	398	Mar/15/2023 17:31	419
Mar/18/2023 8:26	412	Mar/15/2023 15:27	407
Average	**380**	**Average**	**417**



	My Speedtest Results_3-19 to 3-20	
2	Date	Download
3	Mar/20/2023 22:27	106
4	Mar/20/2023 21:41	114
5	Mar/20/2023 16:09	183
6	Mar/20/2023 15:57	172
7	Mar/20/2023 15:36	127
8	Mar/20/2023 15:16	117
9	Mar/20/2023 13:59	167
10	Mar/20/2023 13:33	193
11	Mar/20/2023 12:56	196
12	Mar/20/2023 12:51	146
13	Mar/20/2023 10:40	167
14	Mar/20/2023 10:25	211
15	Mar/20/2023 10:21	142
16	Mar/20/2023 10:15	147
17	**Average**	**156**
18		
19	Mar/19/2023 14:39	260
20	Mar/19/2023 12:23	357
21	Mar/19/2023 10:32	550
22	Mar/19/2023 9:36	555
23	Mar/19/2023 7:08	163
24	Mar/19/2023 5:06	178
25	Mar/18/2023 16:34	375
26	Mar/18/2023 15:37	454
27	Mar/18/2023 14:01	125
28	Mar/18/2023 12:30	53
29	Mar/18/2023 10:32	134
30	Mar/18/2023 10:20	130
31	Mar/18/2023 9:57	212
32	**Average**	**273**



I have not copied anyone else on this message, as it is of a more personal nature. Despite your company's apparent policy to never respond to emails except verbally by phone, I would appreciate a written response as an acknowledgement of you reading it.
Let me know what you decide,
Lefty

From: SpectrumChatSupportEngineers [mailto:SpectrumChatSupportEngineers@charter.com]
Sent: Tuesday, March 21, 2023 10:29 AM
To: Lefty <lefty@tcw.org>
Subject: RE: [EXTERNAL] Charter/Spectrum and me
Lefty,
I appreciate your detailed messages, but I want to assure you that we are reviewing the information you are providing us. We have many hands on this and are attempting to come to a finalize our results. In doing so we have to check every possible avenue and I don't want it to seem like we are redirecting our investigation, but instead just gathering data ourselves because we understand how important this is for you. I should have an update for you by 4:00 pm CST.

3/21/2023 Engineer called me on the phone. This was basically the blow-off call, because I called his bluff in the previous email.

I said that I do not mind being wrong as long as you can prove me wrong. Your conclusion that everything on your end is fine could be objective based on data or subjective based on corporate policies. *(See your end user agreement that says that we do not really promise anything.)*

I asked what I could do beyond what I have already done, to prove that their system is flawed. He said I could collected data from a brand new computer and submit it for review. I asked if that would change their minds, and **he said not at this point.**

Since their DOCSIS 3.1 modem blew up the system, could I put my own modem on? Like a Spectrum approved Motorola MB8611 DOCSIS 3.1 Multi-Gig Cable Modem, 2.5 Gbps Ethernet Port, or a NETGEAR Nighthawk Multi-Gig Cable Modem CM2000. He said that my modem would then become a variable as to firmware version and hardware capability despite being fully approved by Spectrum. And NO they would not send me one or install another modem.

He said that there were more people working on this problem that he had ever seen before. Yet they cannot spend any more effort on just one customer. I said that he was thinking about it wrong, because there are as near as I can tell 547 customers on this node. So any improvements you make to the node impact them all. Conversely, as this is a shared system, it is like someone peeing in the corner of a swimming pool, eventually it will affect everyone in the pool.

He reiterated many times that all their people from NetOps and above have reviewed this situation and pronounced it good. I asked him to objectively prove that to me by showing me the SNMP data from my modem. He refused and said that they just do not do that.

I explained that these are MY data packets and there is nothing proprietary about them, just the IP's of ingress and egress. He again refused.

I asked him to think back to HS math class and that your answer was marked wrong if you did not show how you got to your answer. I demanded to see their homework, he refused.

I told him that I do not accept the current situation and may very well escalate this to the C-suite, and he say that they were already looped in on this. I find that to be unlikely.

He said that they were dedicated to providing the advertised service and asked what their motivation would be for not delivering on a promise. I said that there would definitely be a cost benefit analysis done on this, since upgrading their system cost money, and rural America has historically gotten the short end of the stick.

Perhaps I should upgrade my service to 1Gbps, at least for a bit, to get a new modem and force them to fix their shit. Call them on their bullshit, so to speak. So for twenty bucks, I upgraded online and they are sending me a new self-install modem, in 3-5 business days. ☺

1. Six of my ten computers, tested on 1Gbps and 2.5 Gbps Ethernet
2. Four different operating systems, (Win10 Pro, Win10 LTSB, Win7 Pro, Win7 Ultimate)
3. Six different software loads, MS Office, Norton Ghost, Zone Alarm, MSE, etc.
4. Six different 1Gbps network interface cards and drivers
5. Six different wireless adaptors and drivers (802.11n, ac, ax)
6. Six different CPU and memory configurations
7. Four different computer models (brands HP, Intel, Microsoft, Samsung)
8. Five different speed test sites

But yet all with random, and erratic slow and fast speeds ranging from 50Mbps to 550Mbps

All only have only two things in common. Spectrum's modems, although we tried a Hitron, Ubee, Technicolor, and a Sercomm DOC 3.1, 2.5 Gbps (which blew up their network), and the Spectrum Internet network node.

Stay tuned for more…

3/22/2023 I noticed today what my upload speeds increased from 20Mbps to 40Mbps today which means the new provisioning is in place.

So the modem arrived a bit early, and let us go now to the self-install potential disaster.

The self-install activated the modem, but failed to complete according the tech support rep because the acceptance of the Terms and Conditions of Service was not working correctly on their end.

That document is 13 pages in Trebuchet MS[14] 5.81 point type and too boring to read online and impossible even for young eyes to read on paper.

But I blew it up to 250% on my big screen and read it anyway. I read it so you do not have to. Some high(low) lights:

Spectrum Residential General Terms and Conditions of Service
(Covers Internet, Phone, and TV services.

4. Network Management. Spectrum uses a variety of reasonable network management tools and practices consistent with industry standards. In the event the periods of congestion necessitate such management, Spectrum has available the following tools and practices (without limitation and as may be adjusted over time): (i) Subscriber Traffic Management (STM) technology to **temporarily lower the priority of traffic with the greatest impact on peak congestion;** (ii) spam filtering and detection techniques; and (iii) measures to protect the security and integrity of its network, resources and subscribers (e.g., IP reputation services from multiple sources to deny mail relay to suspect IPs of Charter IP space, real-time IP block lists to determine whether to accept a connection to inbound mail servers, port security techniques such as encryption and authentication, and email server- to-server traffic monitoring). In limited instances if employed, **these techniques may affect the throughput rate at which subscribers may send and receive data**, the ability of users to establish session connections within the network, or result in the delay of certain traffic during times of peak congestion.

[14] *Trebuchet MS is a humanist sans-serif typeface that Vincent Connare designed for Microsoft Corporation in 1996. Trebuchet MS was the font used for the window titles in the Windows XP default theme, succeeding MS Sans Serif and Tahoma. Wikipedia.org*

Spectrum Residential Internet Services Agreement

2. Cable Modem/Other Spectrum Equipment: Subscriber may obtain a cable modem from Spectrum or may purchase and use a cable modem purchased at retail from a third party, provided that such third party modem has been tested, certified and approved by Spectrum in accordance with our DOCSIS Modem Policy at?

7. Cookies: Subscriber may access Subscriber's Spectrum e-mail account and support website at spectrum.net, provided that Subscriber's browser is configured to accept cookies from www.spectrum.net. **Really?**

e. Bandwidth.

i. Subscriber understands and agrees that Spectrum does not guarantee that any particular amount of bandwidth on the Spectrum network or that any speed or throughput of Subscriber's connection to the Spectrum network will be available to Subscriber. Subscriber understands and agrees that the speed of the Internet

Service provided at Subscriber's site will vary depending upon a number of factors, including Subscriber's computer system(s) and associated equipment (e.g., Subscriber-sourced WiFi routers/access points, etc.), Internet traffic, and other factors such as system capacity limitations, governmental actions, events

beyond Spectrum's control, and system failures, modifications, upgrades and repairs. Subscriber understands that Subscriber's wireless connections and use of wireless routers may be subject to greater fluctuations in speed and latency and may be adversely affected by interference, congestion, distance, and other outside factors.

Charter Internet subscribers are required to use an authorized modem for use on the Charter Spectrum network.

Recommended Modems: Charter recommends customers use devices that have passed Charter's full performance certification testing in order to receive optimal service performance. The list of Recommended Modems can be found at www.spectrum.net/modems.

Minimally Qualified Modems: Certain modems have passed minimal testing to confirm that they will not cause harm to Charter's network. Though permitted for use on its network, Charter recommends against using Minimally Qualified Modems, because they have not been tested to confirm their capability of rendering Charter Spectrum Internet services without interruption or other service degradation. Minimally Qualified Modems may not have the capability of delivering the purchased Internet service speed. The list of Minimally Qualified Modems can be found at www.spectrum.net/modems.

Device Requirements

In order for a modem to be certified as an authorized device for use on the Charter Spectrum network, it must pass CableLabs certification, FCC certification, and Charter's certification process. The current device specifications for both full Internet speed achievement performance and minimal qualification certification can be obtained by contacting Charter at RES_ChrtRetailDOCSIS@charter.com.

Charter's certification process covers testing including DOCSIS performance and compatibility/integration with Charter's network and systems. The current certification process can be obtained by contacting Charter at RES_ChrtRetailDOCSIS@charter.com. https://www.spectrum.com/policies/terms-of-service

Meanwhile, I wondered what ChatGPT has to say about this situation.

LE Does Spectrum oversubscribe it's customers?

Spectrum is a telecommunications company that provides internet, cable TV, and phone services to customers across the United States. Like many other ISPs (Internet Service Providers), Spectrum oversubscribes its network to some extent.

Oversubscription is a common practice in the ISP industry, and it means that the ISP sells more bandwidth than it actually has available on its network. This is done because not all customers use their full bandwidth at the same time, so the ISP can provide more bandwidth to more customers than it has available.

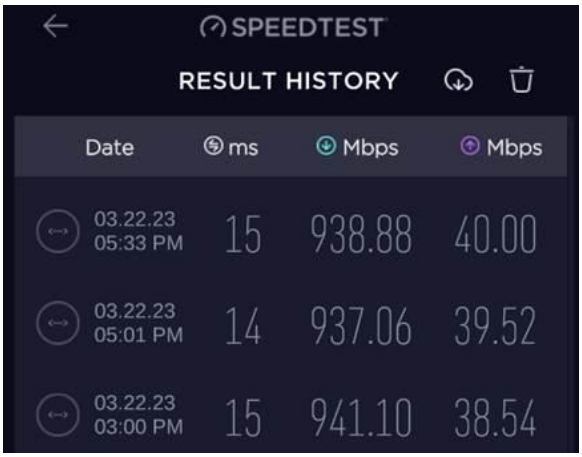
However, oversubscription can lead to network congestion and slower internet speeds during peak usage times, especially if too many customers are using their full bandwidth simultaneously. To avoid this, ISPs generally monitor network usage and adjust their oversubscription rates accordingly.

Spectrum, like most ISPs, does oversubscribe its network to some extent, but it also invests in its network infrastructure to ensure that it can provide high-speed and reliable internet service to its customers. The extent of oversubscription and the quality of service provided can vary depending on factors such as location, network infrastructure, and customer

So I did some testing with the new modem and sent this email to Spectrum:

From: Lefty [mailto: lefty@tcw.org]
Sent: Thursday, March 23, 2023 8:36 AM
To: spectrumchatsupportengineers@charter.com
Subject: What?
Engineer,
Inconsistent on the same day at the same approx. time with the Ubee 3.1, 2.5 Gbps modem from the Netgear Nighthawk router. Testing to Spectrum.com/speedtest (Eau Claire server) Testing from the Intel NUC. **This is a 51% variation.**

More consistent **at a higher level** on the same day at the same approx. time with the Ubee 3.1, 2.5 Gbps directly from the modem. Testing to Spectrum.com/speedtest (Eau Claire server) Testing from the Intel NUC.



Then just when you say to yourself ah ha it is the router, the router shows you this:

So I got a considerably different IP address, the self-provisioning told me that something was coming from Eau Claire. What else changes at the CMTS to upgrade to this level? A software setting?
My IP is now higher in the last octet of the host part at the end of the address at the end of your IP NetRange here.
I asked multiple times to temp provision me to 1Gbps for testing, and the answer was always NO.
But it now looks like this provisioning, or the modem or the work of your NetOps guys did stabilize my connection.
I have also contributed by now only using one test site, and only using one Ethernet computer.
Btw, it is a PITA to be disconnected from the Internet, and the work I need to do, so that I can run these tests.
Lefty, former altar boy in the Catholic Latin days
PS. I _*was*_ wrong about your network not supporting 3.1 modems. Mea Culpa, Mea Culpa, Mea Maxima Culpa

It is interesting that the phone number he calls me from does not have voicemail. It either rings endlessly or gives a busy signal. Have not heard one of those in many years.

3/23/2023

What I found interesting in some side testing, is that since the 1Gbps upgrade, the other Speedtest sites that I have historically gone to, show basically the same results as with the 500Gbps service.

I believe that the reason for this is that these ISP's who host the Speedtest servers only allocate a 1Gbps pipe to these servers. So similar to CyberLynk, this pipe is 60-80% saturated at all times, so there is no way you are going to get a 1Gbps test result at these places.

Once I get off the Charter/SPECTRUMNET:

Going to MLabs in Chicago still gives me the 50-60Mbps results that I had previously. https://www.measurementlab.net/

Measurement Lab (M-Lab) provides the largest collection of open Internet performance data on the planet. As a consortium of research, industry, and public-interest partners, M-Lab is dedicated to providing an ecosystem for the open, verifiable measurement of global network performance. M-Lab is an open source project with contributors from civil society organizations, educational institutions, and private sector companies dedicated to hosting the largest open Internet performance dataset on the planet. In the United States, the FCC's contractor, SamKnows, uses the M-Lab platform to host a portion of the tests for the annual Measuring Broadband America program.

Note: I have not been able to determine the total test server bandwidth availability at MLabs, but it is a FCC approved testing site.

On testmy.net in Colorado Springs, CO, I get 41.6 Mbps.

Then I enabled multithread[15] and got 223.8 Mbps. https://testmy.net/multithread

> The TestMy network has a total capacity of over 2000Gbps and our servers have multiple gigabit uplinks into that network. TestMy is always overstocked with bandwidth and can meet the needs of even the most demanding connections. Our servers are also configured and tested to maintain full quality of service for thousands of miles.
>
> We have multi-homed connectivity and bandwidth from over 25 independent Tier 1 carriers including Comcast, Cox, Time Warner, Charter, Qwest, Google, Level 3, Internap, NTT America, Equinix & Telefónica to name a few.

[15] *The multithread speed test has the ability to draw from more than one resource at a time, providing a truly comprehensive test result.*

Charter Mosinee, WI Server 409.35Mbps https://wifiman.com/

Spectrum 174.33 Mb/s https://speedtestgroup.com/ Vint Hill: FIREPROBE.NET

Provider: Spectrum powered by FIREPROBE.NET Unknown server location

So Spectrum's Eau Claire SPECTRUMNET test server must have a minimum of a 10Gbps pipe to it, or perhaps some other Charter/Spectrum chicanery is involved. (completed tests performed start to finish, and not estimates)

Meanwhile, tomorrow I am going to try to get into my old modem before I send, it back, only if they threaten the $60 fine or maybe not even then, to see what the web interface looks like.

I failed last time because I did not have a crossover cable in between, so I will put a switch in between to properly reverse the RX and TX.

Meanwhile in my office, in attempt to duplicate the speed results of the NUC, running straight off the built-in Netgear router switch, on three other computers. I have eliminated a seemingly unnecessary cheap Brand X gigabit Ethernet switch and replaced another necessary cheap Brand X gigabit Ethernet switch with a more expensive managed Netgear 8-port gigabit Ethernet switch that supports Jumbo Frames. (an Amazon review indicated that a guy had tested the throughput to be 940Mbps).

A network card driver update on the desktop seemed to somewhat improve the consistency of the results, however it had done a 550Mbps test result (once in a row) with the pervious 500Mbps service. It now inconsistently does 200-600Mbps with the 1000Mbps service before the switch replacement.

Back to the modem hack.

So since I discovered that the DOCSIS 3.1 modems supplied by Spectrum have a web interface, and they showed me credentials, I decided to have a look at my old DOCSIS 3.0 modem.

I pinged the supplied IP 192.168.100.1 and it showed me *destination unreachable*. But interestingly enough, the ping basically told me *Hey I am actually 192.168.1.3 so hit me there*.

So I pinged it and it replied. So then, I tried http://192.168.1.3 and there was nobody home. I could ping but no web interface.

So maybe some time I will look at the new modem to see what I can see.

On the Netgear Community Forum:

Lefty Insider Tutor

2023-03-26 08:32 AM

Well, I solved it on the tablet anyway. Switching cables made no difference, resetting TCP/IP made no difference, turning off zone alarm made no difference. But uninstalling it did! Jumped from 300Mbps to 940Mbps. Who would have thunk it? Back to MSE for me on this one.

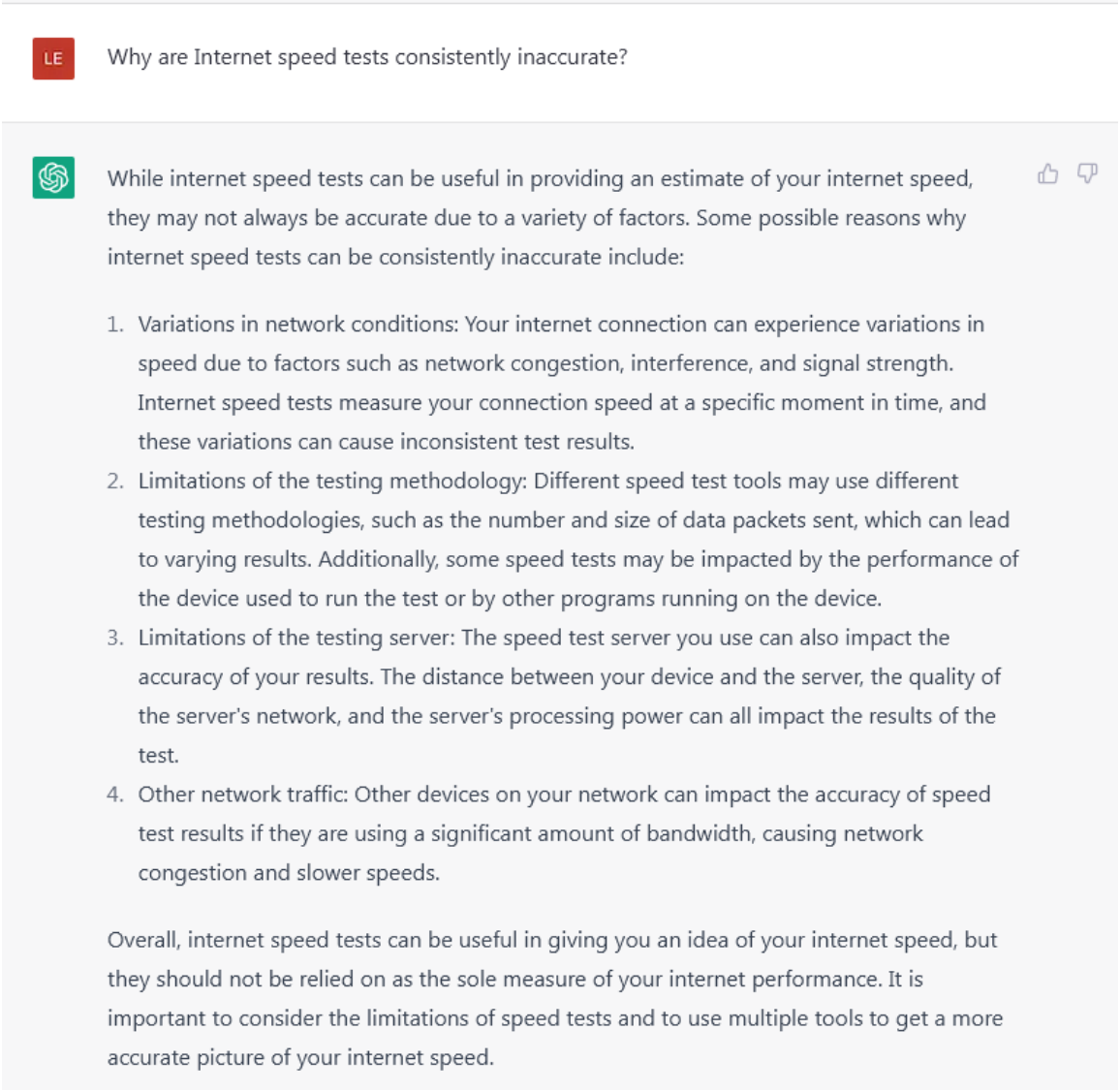
Now to resolve the other three slow pokes.

Removed Zone Alarm from Computer Two and bumped the speed from 250 to 850Mbps. Going to change the USB Express Card to get the last 100Mbps.

On Desktop Three, removed Zone Alarm and the speed went from 145Mbps to 920Mbps.

Laptop One did not have Zone Alarm and is sitting at 450Mbps. Will try to remove SpyShelter, change out the USB3 Express Card for a USB3 Super Speed, and whatever else might be slowing it down.

Meanwhile, back to ChatGPT:



Having now given up on wireless connections, I happen to run across this post:

Re: Why Internet speed tests are consistently inaccurate?

FURRYe38 Guru 2023-03-27 12:20 PM
Possibly due to Wi-Fi devices being 2x2 MIMO and most of those top out at around 300-700Mpbs depending on their design and support. Only 4x4 MIMO devices can see anything near 900Mpbs or over.

Lefty Insider
Tutor
2023-03-27 05:51 PM
Ok, good thanks.
I have:
2-QGOO AX1800 XHT-6B16 USB 3.0 Wi-Fi Dongle Wi-Fi 6 Wireless Adapter Dual Band 5Ghz/2.4Ghz High Gain Dual 5dBi Antennas 802.11ax MU-MIMO Wireless Data Transfer Rate 1200 Mbps

1-Netgear A7000 AC1900 Wi-Fi speeds up to 600 Mbps on 2.4 GHz and 1300 Mbps on 5 GHz. 3x4 MIMO design - more bandwidth capacity when downloading and uploading data to and from the wireless network

1-Intel AX200 TX/RX Streams 2x2 Bands 2.4, 5 GHz (160MHz) Max Speed 2.4 Gbps Wi-Fi 6 (802.11ax) MU-MIMO

So they should all give me more than 500Mbps right?
My Setup | ISP Spectrum| Internet Cable 1000↓/40 RX1000
Message 17 of 19
Success!

FURRYe38 Guru
2023-03-27 06:13 PM
2x2 will top out at around 300-700Mpbs depending.
3x4, haven't see that but it only connects at 1300Mpbs so maybe same as 2x2. Again depending.
My Setup ISP SparkLight| Internet Cable 1000↓/50↑ CAX30 Gateway Mode |Wi-Fi Router and RBK853 | Switches NG GS105/8, GS308v3, GS110MX and XS505M
Message 18 of 19

Lefty Insider Tutor
2023-03-27 07:49 PM
I can run this command but I just dumps be back to a command prompt from c:\ or the C:\windows, no errors
From C:\windows\system32 it says the FIND Parameter format is not correct (am using F3 to repeat the command)
netsh wlan show all | find /I "MIMO"
Still haven't figured out the syntax and the /? is not helping me.
Btw, I just got 943Mbps from my Surface Pro 7+ standing next to the router, 100 less if I walk 20ft to the sunroom and 300 less if I close the glass French door. Go figure!
If I put the A7000 in it, it gets about 300Mbps at the router
So apparently, your mileage will vary here.
Lefty
Help save our libraries from the Fascists.
https://www.battleforlibraries.com/
Signup and donate as I did.
My Setup | ISP Spectrum| Internet Cable 1000↓/40 RX1000

Meanwhile, some research provided this info:

Imagined Spectrum Question and Answer

Q. Why do some cable modems have a 2000Mbps port if the available routers only have a 1000Mbps Ethernet port?

- Motorola MB8611 DOCSIS 3.1 Multi-Gig Cable Modem | Approved for Comcast Xfinity Gigabit, Cox Gigablast, Spectrum, and More | 2.5 Gbps Ethernet Port
- NETGEAR DOCSIS 3.1 Multi-Gig Cable Modem Max download speeds of 6.0 Gbps, For XFINITY by Comcast, **Spectrum**, and Cox (CM1200) | 2.0 Gbps Ethernet Port

A. 1 The point is not to deliver more than 1000Mbps to you, since obviously it is not capable of doing that. The point is to use the cable node more efficiently so that there is enough bandwidth on the node for several users to get 1000Mbps at the same time. Thus, the modem has to use higher speed modulation rates on the cable network to achieve this higher efficiency at the cable node.

A. 2 For a lot of residential Internet access network, access medium is actually shared, which means around **a few dozen users are in the same medium** and share the total 2000Mbps access. If the modem is only 1000Mbps, depending on the exact technology, it may require the whole neighborhood medium to run at 1000Mbps.

Even if it can co-exist on a 2000Mbps medium, it takes twice the timeslot to transmit any data. If most of the modems connecting to the 2000Mbps medium only support 1000Mbps, the Internet capacity of the whole neighborhood is reduced roughly by half.

So a modem with faster WAN media access does not help your Internet speeds directly **unless you have a broadband plan close to 1Gbps**, but it does increase the overall capacity of the block and everyone can potentially get faster access if they want to.

A. 3 There is no point to it. Xfinity offers a 2Gbps service but the Netgear modem (CM1000) is a DOCSIS 3.1, very much capable of 2Gbps on the WAN side, but the LAN side only has one 1Gbps Ethernet port. Both the WAN side (coax side) and LAN side (Ethernet) and then eventually to a router are also shared. Packet switching does not work the same way as circuit switching.

Xfinity will continue to upgrade their network WAN to go to maybe 5Gbps as they see fit to compete with fiber GPON. But the uplink side for DOCSIS 3.1 is limited to max of 200Mbps. The next network infrastructure upgrade is DOCSIS 4.0 that will give them symmetric up and down, or 10G-down/6G-up.

Q. What is the actual data rate of a 1Gbps Ethernet port?

A. The default Gigabit Ethernet has a potential frame throughput of 81000 per second and therefore a high throughput for actual data (about 118 MB/s), giving efficiency of 94%, or 940Mbps. Jumbo Frames[16] can potentially offer 99% of the theoretical Gigabit Ethernet bandwidth to carry data, which means 990Mbps capacity.

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[16] In computer networking, jumbo frames are Ethernet frames with more than 1500 bytes (standard Ethernet frame size) of payload. Jumbo frames can carry up to 9000 bytes of payload for 1 Gigabit and 16128 bytes for 2.5 Gigabit. Gigabit Ethernet switches and Ethernet network interface controllers. Each Ethernet frame must be processed as it passes through the network. Processing the contents of a single large frame is preferable to processing the same content broken up into smaller frames, as this makes better use of available CPU time by reducing interrupts. This minimizes the overhead byte count and reduces the number of frames needing to be processed, which is analogous to physically mailing a packet of papers instead of several single envelopes with one sheet each, saving envelopes and cutting sorting time. Jumbo frames should not be used in 10/100 networks.

In my quest to discover data types and data rates in and out of my Spectrum connection, I decided to get an AI involved (ChatGPT), and then do additional research. These are the results:

https://chat.openai.com/ Session

Q. Does the Netgear XR1000 router support SNMP monitoring?
Yes, the Netgear XR1000 router does support SNMP monitoring. You can enable SNMP on the router through its web interface and configure SNMP management software to monitor and manage the device.

To enable SNMP on the Netgear XR1000 router:
Log in to the router's web interface.
Go to the "Advanced" tab.
Click on "SNMP" in the left-hand menu.
Enable the SNMP service and configure the SNMP settings as desired.
Click "Apply" to save the changes.
Once SNMP is enabled on the router, you can use SNMP management software to monitor and manage the device. You will need to configure the SNMP community string, IP address, and other settings in your SNMP management software to communicate with the router.
Note that the specific SNMP data available from the Netgear XR1000 router may vary depending on the firmware version and other factors. You may need to consult the router's documentation or contact Netgear support for more information on the available SNMP data.

Q. how do I get SNMP data from a Netgear XR1000 router?

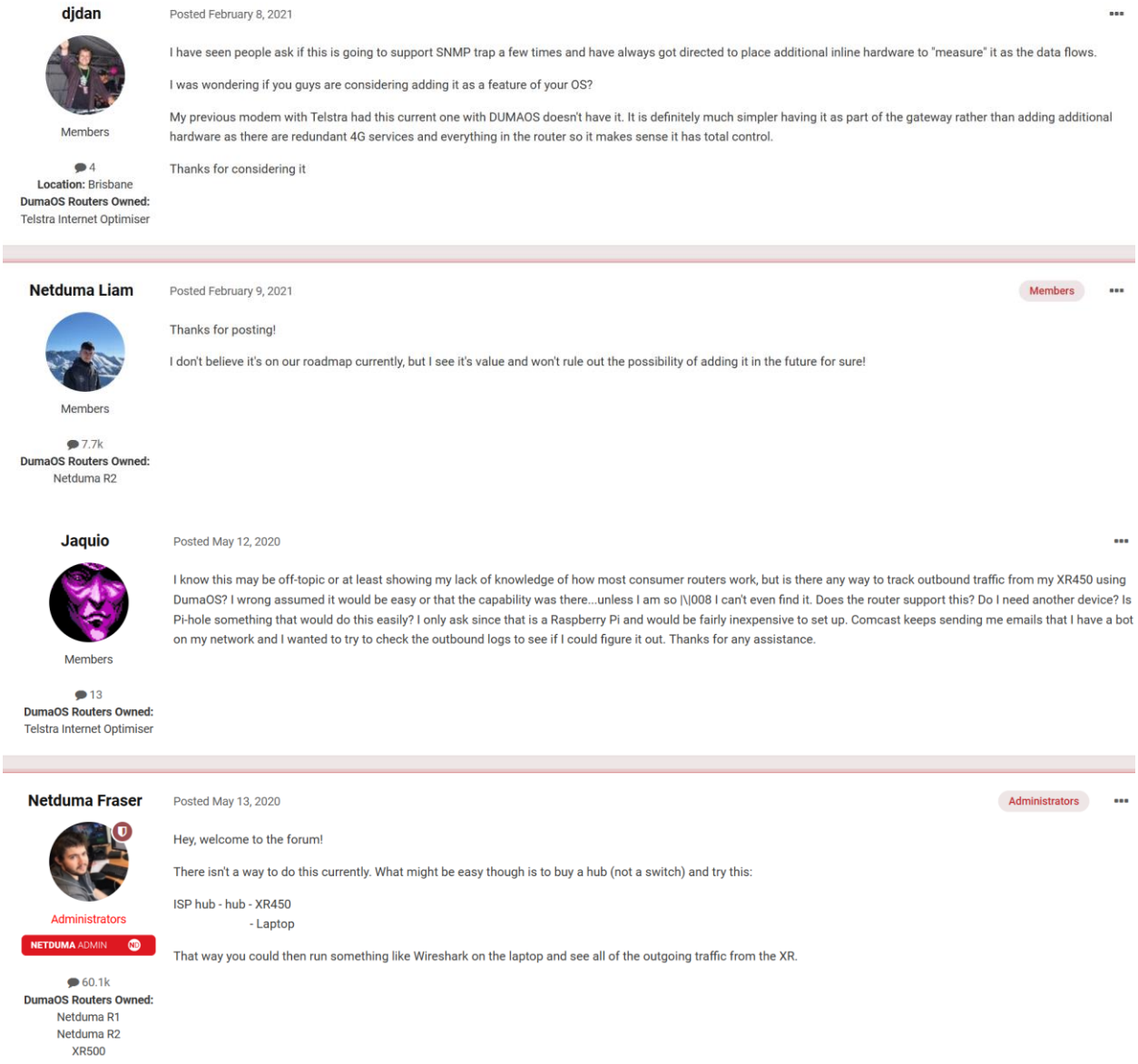
To get SNMP data from a Netgear XR1000 router, you will need to follow these general steps:

1. Ensure that SNMP is enabled on your router. To do this, log in to your router's web interface and navigate to the SNMP settings. Enable SNMP if it is not already enabled.
2. Determine the SNMP community string for your router. This is a string of characters that functions as a password for SNMP access. The default community string for Netgear routers is usually "public," but it is a good idea to check your router's documentation or web interface to confirm.
3. Decide which SNMP management software you want to use to access the data from your router. Some popular options include LibreNMS, PRTG, and Nagios.
4. Configure your SNMP management software to connect to your Netgear XR1000 router. You will need to specify the IP address or hostname of the router, along with the SNMP community string.
5. Once your SNMP management software is connected to your router, you should be able to access a variety of data points, such as network traffic, interface status, and system uptime.

Keep in mind that the specific SNMP data available from your router will depend on the make and model, as well as the SNMP management software you are using. You may need to consult your router's documentation or your SNMP management software's documentation for more information on what data is available and how to access it.

Well, so following these instructions is when I discovered that ChatGPT was a liar.

https://forum.netduma.com/ Session



djdan — Posted February 8, 2021

Members

4
Location: Brisbane
DumaOS Routers Owned:
Telstra Internet Optimiser

I have seen people ask if this is going to support SNMP trap a few times and have always got directed to place additional inline hardware to "measure" it as the data flows.

I was wondering if you guys are considering adding it as a feature of your OS?

My previous modem with Telstra had this current one with DUMAOS doesn't have it. It is definitely much simpler having it as part of the gateway rather than adding additional hardware as there are redundant 4G services and everything in the router so it makes sense it has total control.

Thanks for considering it

Netduma Liam — Posted February 9, 2021 — Members

Members

7.7k
DumaOS Routers Owned:
Netduma R2

Thanks for posting!

I don't believe it's on our roadmap currently, but I see it's value and won't rule out the possibility of adding it in the future for sure!

Jaquio — Posted May 12, 2020

Members

13
DumaOS Routers Owned:
Telstra Internet Optimiser

I know this may be off-topic or at least showing my lack of knowledge of how most consumer routers work, but is there any way to track outbound traffic from my XR450 using DumaOS? I wrong assumed it would be easy or that the capability was there...unless I am so |\|008 I can't even find it. Does the router support this? Do I need another device? Is Pi-hole something that would do this easily? I only ask since that is a Raspberry Pi and would be fairly inexpensive to set up. Comcast keeps sending me emails that I have a bot on my network and I wanted to try to check the outbound logs to see if I could figure it out. Thanks for any assistance.

Netduma Fraser — Posted May 13, 2020 — Administrators

Administrators
NETDUMA ADMIN

60.1k
DumaOS Routers Owned:
Netduma R1
Netduma R2
XR500

Hey, welcome to the forum!

There isn't a way to do this currently. What might be easy though is to buy a hub (not a switch) and try this:

ISP hub - hub - XR450
- Laptop

That way you could then run something like Wireshark on the laptop and see all of the outgoing traffic from the XR.

From: Lefty [mailto: lefty@tcw.org]
Sent: Monday, March 27, 2023 9:45 AM
To: spectrumchatsupportengineers@charter.com
Cc: Tech Supvr.Mgr@charter.com; Tech Supvr@charter.com; Escalation" <escalation@charter.com>; SVC_CCEDCharter@charter.com; abuse@charter.com; Tech One@charter.com; Tech Two@charter.com
Subject: The Final Resolution of my Spectrum Internet Connection Issues
Cc: Spectrum Chat Support Engineers, Spectrum Technical Staff, Charter/Spectrum C-suite, News Media, FCC and FTC, Wisconsin DATCP
Engineer et al,
After spending the majority of this month again troubleshooting, and hosting a total of no less than *seven* of your technical people into my home, (not to mention the several months in 2021), I now have **a rock solid Internet connection.** This connection consistently reports download speeds of **940Mbps** to your Eau Claire, WI test server, but also to Comcast servers in Chicago and Denver. I use these for testing since you do not have test servers available at these locations, and Tier Two Internet providers seem to have sufficient bandwidth for reliable and consistent speed testing.

I have learned a lot during this process including:

- The general lack of technological curiosity of your field technicians ("and all this science I don't understand, it's just my job five days a week") *Major Tom, Elton John*
- How poorly **equipped** and trained your tech field personnel actually are, resulting in ineffective problem resolution
- How technically weak your tech supervisors actually are in resolving problems that should have already been resolved. They understand Cable TV hertz and decibels, but not Internet Mbps and switched TCP/IP data packets
- How determined and consistent your employees are to assign fault to the customer, and abdicate responsibility (not owning the issue)
- How difficult it was for me to troubleshoot this issue with the combined variables of multiple computers, wireless and wired Ethernet connections, substandard speed test sites, and a flaky random Spectrum Internet connection
- How some of your employees will go out of their way to help, but only up to a certain point
- How ill-equipped your employees are to effectively communicate and troubleshoot with a customer who knows more about this subject than just where their modem is located
- A new appreciation for the bandwidth shortcomings of my web and email server ISP, and the inadequacies of speed test sites in general
- A new understanding of how software can interact with the TCP/IP stack on my computers

I do appreciate your self-described *extraordinary* efforts provided to me by your Engineering and Network Operations staff.
In the end however, I upgraded my account online, installed and self-provisioned the modem you provided, (next day), and basically resolved the issue myself.
I do not know for sure what were the other factors here, if it was the node split, the speed upgrade, the new IP address, or the new modem, or a combination of all of them, that finally actually resolved the issue. That is your business to manage not mine. I am retired, and am just trying to relax.

I hope that you take this message in the spirit intended, as a field report from an unpaid consultant, who is trying to ensure Rural America reaps the economic benefits of high speed Internet connectivity that is *their right* and that other developed counties around the world enjoy.
I have taken the liberty of curating and consolidating the headlines from this continuing decade's long horror story below. There is plenty there for all those involved to be ashamed about, including perhaps many copied in on this email screed.
Lefty

Meta Slams Telco Fee Proposal, Says ISPs Should Pay Their Own Network Costs (arstechnica.com)
Posted by msmash on Friday March 24, 2023 @03:20PM from the tussle-continues dept.
Proposals to pay for broadband networks by imposing new fees on Big Tech companies "are built on a false premise," Meta executives wrote in a blog post today. From a report: *"Network fee proposals do not recognize that our investments in content drive the business model of telecom operators," Meta executives Kevin Salvadori and Bruno Cendon Martin wrote. Meta's comments came a few weeks after Netflix co-CEO Greg Peters spoke out against the proposal being reviewed by European regulators. Meta executives said telecom operators and content application providers (CAPs) "are symbiotic businesses, occupying different but complementary roles in the digital ecosystem. Every year, Meta invests tens of billions of euros in our apps and platforms -- such as Facebook, Instagram, and Quest -- to facilitate the hosting of content. Billions of people go online every day to access this content, creating the demand that allows telecom operators to charge people for Internet access. Our investment in content literally drives the revenue and business model of telecom operators."*
Internet service providers in the EU argue that Big Tech companies should pay a "fair share" toward network-building costs. In the US, Federal Communications Commission Republican Brendan Carr claims that "Big Tech has been enjoying a free ride on our Internet infrastructure while skipping out on the billions of dollars in costs needed to maintain and build that network." Big Tech companies don't actually get free access to the Internet, though. Anyone distributing content over the Internet pays their own providers, builds their own network infrastructure, or does some combination of the two. For extremely large companies like Netflix and Meta, investments include building their own content-delivery networks. "Over the last decade, CAPs have collectively invested over $880 billion in global digital infrastructure, including approximately $120 billion a year from 2018 to 2021," Meta's blog post today said. "These infrastructure contributions made by technology companies save telecom operators around $6 billion per year."

Biden Broadband Plan Runs Headlong Into 'Buy American' Mandate (bloomberg.com) 70
Posted by msmash on Friday March 24, 2023 @02:40PM from the closer-look dept.
President Joe Biden made clear in his State of the Union address last month that as the US spends billions of dollars on new broadband connections, "we're going to buy American." But that aspiration is easier said than done. From a report: *While there seems to be enough domestic fiber optic cable to connect communities, the electronic components such as routers that transform glass strands into data highways are made mainly in other countries. Cable providers, chip makers and wireless carriers are pleading for relief from the requirement to "buy American," saying they can't build new networks without foreign electronics. Otherwise the broadband buildup that Biden has set as a priority will be delayed by years as domestic sources are developed. "Everybody's sorting this out," said Lefty Romano, executive vice president of NTCA-The Rural Broadband Association, a trade group. "It's not clear there's much, if any, American equipment that would satisfy Build America Buy America as it stands today." The Build America Buy America Act was enacted as part of the Infrastructure Investment and Jobs Act in 2021, and requires any infrastructure projects to use domestically sourced materials in order to receive federal assistance. That applies to the $42.5 billion Broadband Equity, Access and Deployment Program (BEAD), the flagship Biden initiative for building new networks to connect the 30 million Americans the administration estimates are without fast Internet*

By way of comparison:
•Verizon FiOS Gigabit 940/880 Mbps speeds $69.99 /mo.
•AT&T Internet 1000 940/880Mbps $80 /mo.
•Gigabit Internet by XFINITY from Comcast 1 Gbps/35 Mbps $70.00 /mo.

Comcast's New Higher Upload Speeds Require $25-Per-Month xFi Complete Add-On 34
Posted by BeauHD on Monday October 24, 2022 @08:45PM from the surprise-surprise dept.
The availability of Comcast's promised Internet speed boosts has a catch: users need to purchase a $25-per-month xFi Complete add-on. Ars Technica reports: *"As markets launch, Xfinity Internet customers who subscribe to xFi Complete will have their upload speeds increased between 5 and 10 times faster," an announcement last week said. "xFi Complete includes an xFi gateway, advanced cybersecurity protection at home and on the go, tech auto-upgrades for a new gateway after three years, and wall-to-wall Wi-Fi coverage with an xFi Pod [Wi-Fi extender] included if recommended. Now, another benefit of xFi Complete is faster upload speeds."*
Comcast is deploying the speed upgrade in the Northeast US over the next couple of months. Plans with 10Mbps upload speeds will get up to 100Mbps upload speeds once the new tiers roll out in your region -- if you pay for xFi Complete. Comcast told Ars that faster upload speeds will come to customer-owned modems "later next year" but did not provide a more specific timeline. There is a cheaper way to get the same xFi Gateway with Wi-Fi 6E, as Comcast offers the option to rent that piece of hardware for $14 a month. But Comcast is only making the upload boost available to those who subscribe to the pricier xFi Complete service. While the standard monthly rate for xFi Complete is $25, new customers who sign up by December 31 can get it for $20 monthly during the first year of service.
We asked Comcast today if there's any technical reason it can't deliver the higher upload speeds on customer-owned equipment. A company spokesperson responded that Comcast is working on bringing faster uploads to non-Comcast modems. "We intend to extend the experience to customer-owned modems later next year and are working through the technical requirements as we learn," Comcast said. "We started offering it with our own equipment first and now are working through how to extend to customer-owned equipment." Comcast also said that giving the upload boost to xFi Complete customers first follows its "typical validate, test, and certification process for a new network innovation." But if the reasons for limiting the upload boost to Comcast hardware initially are purely technical instead of revenue-based, it's not clear why people who rent the gateway for $14 a month shouldn't get the same benefit.

But wait, there's more…
https://arstechnica.com/tech-policy/2022/10/want-faster-comcast-uploads-you-have-to-pay-25-month-extra-for-xfi-complete/

FCC Has Obtained Detailed Broadband Maps From ISPs for the First Time Ever (arstechnica.com) 18
Posted by msmash on Tuesday September 06, 2022 @04:09PM from the better-late-than-never dept.
The Federal Communications Commission has collected precise broadband availability information from Internet service providers for the first time and aims to release a first draft of a new broadband map in November, FCC Chairwoman Jessica Rosenworcel wrote Friday. From a report: *The FCC last week "completed the first filing window for submitting data on where broadband service is and is not available," a milestone in the years-long process of creating an accurate US broadband map, she wrote. "For the first time ever, we have collected extensive location-by-location data on precisely where broadband services are available, and now we are ready to get to work and start developing new and improved broadband maps."*
The resulting map should show whether fixed broadband service is available at each residence or business location. The FCC's inaccurate broadband maps have long made it difficult to distribute

deployment grants where they're needed most. Current maps are based on the Form 477 data-collection program in which ISPs report whether they offer service in each census block, which essentially lets ISPs count an entire census block as served even if it can serve just one home in the area. The new, more accurate maps will be used to help distribute $42.45 billion from the Broadband Equity, Access, and Deployment program created by Congress in the Infrastructure Investment and Jobs Act.

Nationwide Study of US ISPs Finds Slower-than-Advertised Downloads and Inconsistent Pricing (msn.com) 38

Posted by EditorDavid on Saturday November 19, 2022 @12:34PM from the lowdown-on-downloads dept.

"Dear Internet service providers of America: We're onto your tReporters," writes *Washington Post* technology columnist Geoffrey A. Fowler: *Last year, I encouraged Washington Post readers to participate in a major nationwide study of ISPs by uploading a copy of their monthly bills to Fight for Fair Internet, a project of Consumer Reports and other partners. Some 22,000 Americans did, and the results released Thursday reveal the many ways Internet and cable companies get away with jacking up our bills.*

For you and me, the study of big and small ISPs alike offers a clearer view of their worst behaviors — and how to fight back. The most important cost-saving lesson: Calling up and threatening to quit your Internet service works. It's super annoying, I know, but Verizon (for example) applied discounts to 58 percent of the bills people submitted, with an astounding monthly median discount of $40.

The study's spotlight on ISP tReporters, including bogus fees, data caps and wildly inconsistent pricing, also is fresh evidence that in many parts of the United States, there just isn't a competitive market for Internet service. Who would put up with it if there were? About 200 million people live in parts of the country with only one or two choices for reliable, fast Internet, according to a 2021 report from the White House.

The report identified the U.S. Internet providers charging the highest equipment rental fees (Wave Broadband) and the highest data-cap fees (Cox Communications), as well as the ones with the lowest and highest monthly service fees. But in addition, *Consumer Reports* notes that "Download speeds routinely fail to match the advertised 'up to' speeds of several ISPs. This was especially true of consumers paying for 'premium' plans purporting to offer download speeds of between 940 and 1,200 Mbps, who in fact experienced median speeds of between 360 and 373 Mbps."

The Washington Post highlights one case "Where you might pay more for less: AT&T" *On volunteer bills, AT&T's median pricing across different speed plans was all over the map. People getting:*

- 12 Mbps paid $63.
- 45 Mbps paid $80.
- 100 Mbps paid $60.
- 1000 Mbps paid $80.

Why should people who aren't even getting minimum broadband speeds (25 Mbps) be paying more than people getting zippy service? ISPs can and will charge whatever they can get away with in your neighborhood.

"The charges on those bills may reflect older plans that we no longer sell," said AT&T spokesman Jim Kimberly. "Customers with older plans can check on our website or call in to see if a lower cost offer is available to them for faster speeds and switch service."

That's another lesson for all of us: It's always worth checking to see if there's a new deal available. Unlike the cellphone carriers, ISPs rarely proactively switch consumers into cheaper or better plans.

Colorado Kills Law That Made It Harder For Cities To Offer Internet Service (arstechnica.com) 24
Posted by BeauHD on Tuesday May 02, 2023 @09:25PM from the good-on-you dept.
Yesterday, Colorado eliminated a 2005 law that required local governments to hold an election before offering cable television or telecommunications service, "a process that pitted city and town leaders against well-funded broadband industry lobbying campaigns," reports Ars Technica. From the report:
Gov. Jared Polis, a Democrat, signed a bill to eliminate that law yesterday. The bill had been approved by the State House in a 48-14 vote and in the Senate by a 31-4 vote. Both chambers have Democratic majorities, but the votes didn't go entirely along party lines; all of the "no" votes came from Republicans, but other Republicans joined Democrats in approving the bill. The bill signed by Polis "gives local governments the authority to provide broadband service, either on their own or by partnering with industry service providers, without holding a local election," the Governor's Office of Information Technology said.
"Each local government is in a unique position or different phase of connecting residents to high-speed Internet, and this bill allows them to establish broadband plans that meet the needs of their communities," Colorado Broadband Office Executive Director Brandy Reitter said. Going forward, cities and towns won't have to hold elections to opt out of the 2005 restriction on municipal broadband. A vote to opt out of the state law didn't guarantee that a city or town would build a network, but the vote was a necessary step and in some cases resulted in a municipal broadband service.

Ohio Republicans close to imposing near-total ban on municipal broadband
https://arstechnica.com/tech-policy/2021/06/ohio-republicans-close-to-imposing-near-total-ban-on-municipal-broadband/

Rural Broadband
https://www.tcw.org/lefty/Short Stories/Rural Broadband.pdf

Broadband Internet for All
https://www.tcw.org/lefty/Short Stories/Broadband Internet for All.pdf

Free the Internet
https://www.tcw.org/lefty/Short Stories/Free the Internet.pdf

The Book of BROKEN PROMISES
https://www.tcw.org/lefty/Short Stories/Telecom Book of Broken Promises.pdf

$200 Billion Broadband Scandal
https://www.tcw.org/lefty/Short Stories/$200 Billion Broadband Scandal.pdf

And so it goes…

Oh, wait one. I still have to work on Spectrum on the noncompetitive price they are not charging me.

- Verizon FiOS Gigabit 940/880 Mbps speeds $69.99 /mo.
- AT&T Internet 1000 940/880Mbps $80 /mo.
- Gigabit Internet by XFINITY from Comcast 1 Gbps/35 Mbps $70.00 /mo.

Oh, and I still have to complain to the FCC and FTC about Spectrum's false advertising.

From: FCC [mailto:consumercomplaints@fcc.gov]
Sent: Tuesday, March 28, 2023 5:52 PM
To: Lefty Insider <lefty@tcw.org>
Subject: Request updated: Spectrum Internet

##- Please type your reply above this line -##
Hi Lefty,
Thank you for your submission. Based on our review, your Ticket No. 6123084 was served on your provider on March 28, 2023.
Here's what you can expect from the FCC's informal complaint process:
- Your provider should contact you directly in an effort to resolve your issue.
- The FCC's role in this process is to facilitate a conversation between you and your provider.
- Your provider is required to submit to the FCC a written response regarding your issue no later than 30 days from today.
- The FCC will not contact you until we receive a response from your provider.
You can view a list of frequently asked questions about the informal complaint process at:
https://consumercomplaints.fcc.gov/hc/en-us/articles/205082880.
This email is a service from FCC Consumer Inquires and Complaints.

So, I guess this will be continued in 30 days or so. But wait I need to respond to this…

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Wednesday, March 29, 2023 9:47 AM
To: 'FCC' <consumercomplaints@fcc.gov>
Subject: RE: Request updated: Spectrum Internet
Hello,
So if you recall, or check your records, we were basically in this same place two years ago.
My tests showed that I was not getting their advertised speed, the said it was "all good" and you took their word for that without them having to provide any supporting data.
Now they have advertised even higher speeds which I was not getting until I upgraded and paid more, which is a new wrinkle this time. I will summarize below.
They refuse to show their homework (data) to me and you do not require any accountability on their part. Even though you know that there is a historical record of false and misleading statements made to the FCC by Charter.

3/21 Upgraded from the standard 200Mbps service to Ultra 300Mbps. Testing showed I was getting around 200Mbps on a good day.
4/21 Charter/Spectrum discounts my service and unattached my billing from the Ultra label (an admission of guilt)
3/23 Charter/Spectrum advertises to me a free 500Mbps upgrade
3/23 I do more testing and discover speeds nowhere near this and are random and inconsistent and I so send emails to Spectrum
3/23 Spectrum sends techs to the house, they again pronounce it OK, but my testing shows that it is not adequate nor consistent
3/23 I work with their engineering people over the phone for weeks and they make some changes to my node, but they eventually say that they are done with me now, despite my connection being flakey in my view based on my test data
3/23 I go online and upgrade to their 1Gbps service, get a new modem and IP address and thus solve the inconsistent speed problems myself

3/23 I now have 940+Mbps speeds, but more importantly the connection is consistent for the first time in two years

Herein lies the problem. I now have to overpay for a speed that I really do not need to get a consistent reliable connection.
If I try to downgrade from 1000Mbps back to the my original 500Mbps my price is the same as it is now, and noncompetitive. $99.99 mo. To get back to a competitive price of $69.99 I have to downgrade all the way back to 300Mbps.
This feels like a bait and switch to me.
Lefty

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Thursday, March 30, 2023 9:17 AM
To: SVP@charter.com
Cc: 'Reporter' <reporter@jrn.com>; Reid, Brandon <breid@manitowoc.gannett.com>; Daisy.Colin@wisconsin.gov; aaron.romens@wisconsin.gov; shawnk.reinke@wisconsin.gov; nicole.raisbeck@wisconsin.gov; 'FCC' <consumercomplaints@fcc.gov>; 'Congressman Glenn Grothman' <CongressmanGrothman@mail.house.gov>; sen.lemahieu@legis.wisconsin.gov; Rep.Tittl@legis.wisconsin.gov; 'Sen.Jacque' <Sen.Jacque@legis.wisconsin.gov>; 'Sen.Wanggaard' <Sen.Wanggaard@legis.wisconsin.gov>
Subject: Charter/Spectrum Internet complaint
Importance: High
Ms. Senior VP
Area Senior VP Field Operations, Central Region
Charter Communications, Madison, Wisconsin
SVP@charter.com
To put a finer point on this info below, after two years of trying to get a stable and consistent Internet connection, be it at 200, 300, 500, or 1000Mbps, I had to upgrade another 20 bucks ($99.99) to get this accomplished.
Not because they did it, but because I figured it out on my own via testing and work.
But now that this has been accomplished, you will not let me back down to the 500Mbps plan at $69.99.

•Verizon FiOS Gigabit 940/880 Mbps speeds $69.99 /mo.
•AT&T Internet 1000 940/880Mbps $80 /mo.
•Gigabit Internet by XFINITY from Comcast 1 Gbps/35 Mbps $70.00 /mo.
Of course, they have manipulated this monopolistic system so that none of the above are available to me and many hundreds of thousands of rural customers.

They insist that I have to drop back to the 300Mbps plan to downgrade my service to get back to this price.
This type of *bait and switch* behavior should be reported widely, and made illegal by our government representatives and regulators.

So Senior VP we worked this out in 2021, what are you willing to do now to rectify this injustice? If you are offering 300Mbps to new customers for $49.99, why can't I get 500Mbps for $69.99? Not to mention 1000Mbps for $89.99.

Then in a somewhat unprecedented occurrence in that I actually received an email, rather than a phone call, from someone at Charter/Spectrum.

From: Senior VP [mailto: SVP@charter.com]
Sent: Thursday, March 30, 2023 1:44 PM
To: Lefty Insider <lefty@tcw.org>
Cc: Spectrum OP VP <VPOP@charter.com>
Subject: RE: [EXTERNAL] Charter/Spectrum Internet complaint

Good day, Mr. Insider,
Thank you for reaching out.
I am reading the outline below and not sure I fully follow what is meant by upgrading ; adding another $20.00 to fix a stable and consistent Internet connection.
Trying to understand the underlying service issue as well as what is the right speed based on your type of use, files, etc. Changing speed should not fix an inconsistent Internet connection, unless I am missing something.
Last time we worked together we did the research of the service level and you had testing to the various hops i.e. Chicago, Eau Claire.
We had our DOCSIS team due trace routes as well.
I see there have a been a few service visits.
Would you confirm if you are working with someone currently as I would like to be sure we are working together as a team.
Thanks,
Senior VP

And of course, I had a response.

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Friday, March 31, 2023 8:47 AM
To: 'Senior VP' <SVP@charter.com>
Cc: 'Spectrum OP VP' <VPOP@charter.com>
Subject: RE: [EXTERNAL] Charter/Spectrum Internet complaint

Hello again Senior VP, and hello OP VP,
Not sure if you read my recent previous few lengthy and detailed emails, describing the sequelization saga consuming my time and efforts this month of March, but you were copied on them. And you would have in fact missed some great new song lyrics I created.
Anyway, long story short, despite the significant efforts of your tech people, what finally stabilized my Internet connection (both speed and bandwidth consistency) was my self-installed upgrade from your 500 to your 1000Mbps service.
Your Engineering and NetOps people claim to not understand why this is so, (or perhaps even believe me) but I do not really care much now that my connection initially seems to be working properly after some two years of trying.
What I do care about now is how "much" this somewhat technically proficient, partially disabled, senior citizen, perhaps verbose, veteran, on a fixed income, is paying to you monthly for your service.

In terms of recent history, after stumbling around with your script-reading phone support people, dealing with underequipped and undertrained technicians in my home, I did finally get to the very competent and personable **Engineer** at your Spectrum Chat Support Engineers. He worked extensively with me until he reached the end of your company's patience with resolving this issue.
So after that big sloppy wet kiss-off, I took it upon myself to perform what ended up being the final solution, so to speak.

I have learned more about speed testing, and I now get consistently good tests to your Eau Claire site, which I did not two years ago, (upgrade there?) and outside your local SPECTRUMNET to Tier Two sites like Comcast in Chicago and in Denver near your Greenwood Village datacenter. I would caution however that this involves using Ookla Speedtest, which the jury is still out on in my mind.
My packets all go there first now according to my trace routes, and the packet ping ponging around Wisconsin, and the packet bouncing out to Reston, VA, seems to have stopped.
I have determined all other tests sites have inadequate bandwidth to their speed test servers, including my own web and email server ISP in Milwaukee. These sites appear to have only 1Gbps connections and are typically 60-80 percent saturated, so there is little hope of getting a 940Mbps test result there.
I would like to get back to the $69.99 plan, but they tell me that even if I drop back to 500Mbps my cost would remain $99.99. The unfairness of this is why I again complained to the FCC and the WI DATCP.
Anyway, I hope I did not bore you and VP with all of this, but you did ask.
Perhaps we should speak on the phone, where you can interrupt my verbosity,
Lefty

Well, the OP VP called me on his cell (non-listed number if you try to call it back) and it turns out that he is Senior VP's replacement as Technical Services VP for Wisconsin, formerly a VP at Comcast, (a former Tier 2 VP now slumming at a Tier 3 company like Charter) as Senior VP was promoted from VP for Charter Operations in Wisconsin up the ladder somewhere.

Former Comcast Division Vice President of Operations specializing in Strategy & Execution, Continuous Improvement, P&L Optimization, Operational Effectiveness, and Customer Experience. A curious career move to me.

We briefly reviewed my situation; he indicated he has spoken to a Field Tech Support Mgr. Supervisor. I opined that what he got from that guy was a technically unsupported opinion. As he was unfamiliar with Spectrum's Sales and Marketing programs, (him being new on the job and all) he will get back to me next week. He asked if reducing the price would now resolve the issue and I agreed that it would.

Meanwhile, my experience with the previous Spectrum OP VP reminded me of this:

The IT Crowd; Jen gives 'The Speech' about the Internet.
https://www.yout-ube.com/watch?v=Vywf48Dhyns

The IT Crowd: "You. Can. Break. The. Internet"
"If you type 'google' into Google.. you can break the Internet, so please no one try it"
https://www.yout-ube.com/watch?v=v2FMqtC1x9Y

Moss Introduces Jen To The Internet
https://www.yout-ube.com/watch?v=iDbyYGrswtg

Meanwhile I continued to use my systems, and occasionally test when things did not seem quite right. Which triggered this email.

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Saturday, April 01, 2023 2:06 PM
To: 'Spectrum OP VP' <VPOP@charter.com>
Subject: RE: [EXTERNAL] Charter/Spectrum Internet complaint
Hello VP,
Engineer, you engineering support supervisor promised me rock solid and consistent performance regardless of the time of day.
It seems like we are not quite there yet, with regard to the latency, upload, and download numbers captured below with Speedtest.exe.
The numbers will vary between sites, as they might, but they also vary widely at the same site.
Ideas?
Lefty

Date	Latency	Download	Upload	ConnType	ServerName
Apr/01/2023 11:59	15	507	38	Ethernet	Eau Claire WI
Apr/01/2023 11:57	23	103	39	Ethernet	Milwaukee WI
Apr/01/2023 11:29	31	67	27	Ethernet	Chicago IL
Apr/01/2023 11:29	23	82	36	Ethernet	Milwaukee WI
Apr/01/2023 9:47	31	99	17	Ethernet	Chicago IL
Apr/01/2023 9:47	23	101	37	Ethernet	Milwaukee WI
Apr/01/2023 9:32	31	76	26	Ethernet	Chicago IL
Apr/01/2023 9:31	16	77	36	Ethernet	Eau Claire WI
Apr/01/2023 8:45	16	79	40	Ethernet	Eau Claire WI
Apr/01/2023 8:41	23	76	32	Ethernet	Milwaukee WI
Apr/01/2023 8:40	32	79	23	Ethernet	Chicago IL
Apr/01/2023 8:39	17	75	40	Ethernet	Eau Claire WI
Mar/31/2023 15:40	15	951	38	Ethernet	Eau Claire WI
Mar/31/2023 10:40	19	936	37	Ethernet	Milwaukee WI
Mar/30/2023 15:31	108	950	40	Ethernet	Eau Claire WI
Mar/30/2023 9:53	18	913	40	Ethernet	Eau Claire WI
Mar/29/2023 15:10	21	949	40	Ethernet	Milwaukee WI
Mar/29/2023 15:08	15	527	40	Ethernet	Eau Claire WI
Mar/29/2023 8:05	31	207	21	Ethernet	Chicago IL
Mar/29/2023 7:33	29	950	40	Ethernet	Chicago IL
Mar/29/2023 7:32	15	951	38	Ethernet	Eau Claire WI
Mar/29/2023 7:31	16	285	37	Ethernet	Eau Claire WI
Mar/29/2023 7:30	32	291	15	Ethernet	Chicago IL
Mar/29/2023 7:27	31	271	22	Ethernet	Chicago IL
Mar/28/2023 8:56	29	952	38	Ethernet	Chicago IL
Averages		422	33		

Milwaukee
Chicago
Eau Claire

From: Spectrum OP VP [mailto: VP@charter.com]
Sent: Friday, March 31, 2023 12:56 PM
To: Lefty Insider <lefty@tcw.org>; Senior VP <SVP@charter.com>
Subject: RE: [EXTERNAL] Charter/Spectrum Internet complaint
Hi Mr. Insider,
I would be happy to discuss your concerns. I attempted to reach you and left a voice mail. When you have time you can reach me at 678 xxx xxxx.
Regards,
VP

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Sunday, April 02, 2023 10:15 AM
To: 'Spectrum OP VP' <VPOP@charter.com>; 'Senior VP' <SVP@charter.com>
Subject: RE: [EXTERNAL] Charter/Spectrum Internet complaint
VP and Senior VP,
Are we there yet?
I am fully showing my homework here, and am all fanned out, see below and attached.

Attached
Desktop Speedtest Results small.xlsx (16 KB); Laptop One Speedtest Results.xlsx (19 KB); NUC Speedtest Results.xlsx (19 KB); Laptop Two Speedtest Results.xlsx (18 KB)

How about you show me my SMNP modem data?

I can understand there being some variations between computers, for whatever technical reasons, but all show fully capable of achieving max speeds.

Computer	Latency	Download Speed (Mbps)	Upload Speed (Mbps)
NUC	18	844	38
Laptop One	20	686	37
Laptop Two	17	523	39
Desktop	26	422	33
Averages	**20**	**619**	**37**
Percentage of Advertised		**62**	**93**
Letter Grade		**D-**	**A-**

Note: I am using the newest version of Ookla Speedtest v1.11.165.1. It defaults to CyberLynk Milwaukee (80 miles) as the preferred server and I have to keep changing it to Spectrum Eau Claire (200 miles) or Chicago Comcast (200 miles). https://www.speedtest.net/apps/windows

Is this connection really fixed as I initially thought, or did you just put lipstick on this chicken?
If we take out all the unsuccessful tests, what is your pass rate?
PS. Tell me again why am I not being paid to do all this field testing work for you?
Lefty

Fastest Countries for Fixed Broadband Internet

Speedtest Global Index™ | November 2021–November 2022

	2021		2022	
Rank	Country	Median Download	Country	Median Download
1	Singapore	184.65	Chile	216.46
2	Chile	173.08	China	214.58
3	Thailand	171.37	Singapore	214.23
4	Hong Kong (SAR)	153.96	Thailand	205.63
5	Denmark	152.31	Hong Kong (SAR)	194.35
6	China	146.62	United States	189.48
7	Monaco	141.63	Denmark	188.35
8	United States	134.10	United Arab Emirates	186.76
9	Spain	131.46	Monaco	181.26
10	Romania	124.36	Romania	170.25

SPEEDTEST OOKLA

Meanwhile back at the ranch, in a further effort to eliminate any possible defects on my end, I noticed that all four computers that I was using for speed testing were using the same 800+k hosts file for DNS lookup.

So I put in a simple hosts file and I did not see any difference it made in the browser or the Speedtest program. I only used a 127.0.0.1 local loopback entry.

I also set my primary DNS to supposed faster name resolution servers, Cloudflare 1.1.1.1 and secondary to Google 8.8.8.8 (rather than those provided by Spectrum) and it seemed to make no difference either.

Then I set the primary and secondary DNS to the Cisco OpenDNS service, which also is supposed to filter a fair number of bad sites.

208.67.222.222 and 208.67.220.220

https://www.opendns.com/

I saw the speed tests on one laptop jump a couple of hundred Mbps but not repeatable. But still a bit faster. Other computers did just fine with the Spectrum DNS. Go figure.

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Monday, April 03, 2023 11:47 AM
To: 'Spectrum OP VP' <VPOP@charter.com>
Subject: Testing results

VP,
It might be a bit unfair to lump all these machines (variables) together in an average and grade them out, like the former teacher in me. And three test sites as well, or variables.
So here is just the NUC ones from 2.5 days in April from the Spectrum site only. *This is a short time frame however.*
There was an odd outlier this morning. Network problems?

Date	Latency	Download	Upload	ConnType
Apr/03/2023 10:48	15	464	40	Ethernet
Apr/03/2023 8:13	15	877	40	Ethernet
Apr/03/2023 6:56	15	931	40	Ethernet
Apr/02/2023 18:35	15	839	40	Ethernet
Apr/02/2023 12:29	15	865	40	Ethernet
Apr/02/2023 11:21	15	930	40	Ethernet
Apr/02/2023 9:48	15	939	40	Ethernet
Apr/02/2023 7:54	15	939	38	Ethernet
Apr/01/2023 18:47	15	822	37	Ethernet
Apr/01/2023 9:23	21	899	40	Ethernet
Apr/01/2023 8:25	29	936	38	Ethernet
Averages	**17**	**858**	**39**	

More like 86% or a B+ on the download.
Lefty

UPDATE

You may recall from my first book, "The Insider", there was a settlement that Lefty's non-profit org received as a result of memory chip price fixing. But to recap:

Then unexpectedly came a miraculous piece of luck. They received news of the awarding of a cy-près[17] fund distribution due to a Static Random Access Memory (SRAM) Antitrust Litigation in California. Essentially this meant rather than using lawsuit proceeds to issue refund checks for a few dollars each to millions of people, the court would distribute these funds to qualifying nonprofit agencies. The requirement was that each recipient agency was required to have a government certified charitable mission, and an operation in which computer SRAM memory played a role. Some memory chip manufacturers had been caught in a price fixing scheme, and then settled the resultant class action lawsuit. The award came from this California court judgement.

Their share of this award, amounting to tens of thousands of dollars, which allowed them to settle their debt obligations. When the agency finally closed years later, the agency was free of any debt obligation residue. Lefty had borrowed heavily from his own personal funds and retirement investments to keep the agency afloat, but now was mostly made whole again. He did however have to sacrifice several years of deferred salary compensation.

It seemed only fitting that corporate price fixing corruption within the computer industry would play a role in helping them provide computers for those without. Yes John Lennon, time does indeed "wound all heels"[18], Lefty mused.

Now, another long delayed CRT Claims settlement appeared regarding price fixing of CRT monitors and TV screens. He personally and from his former business received about $15 for each CRT personal, business, and resale monitors that he had purchased 1995-2007, after the lawyers took their huge cuts of course. This lawsuit took about ten years to realize and to lightly punish these manufactures, all the name brands, for more of this price fixing business. This time however the payments were made directly to those injured. Justice long delayed is still appropriate justice denied, Lefty muttered to himself. Where is my ten years' worth of interest on their ill-gotten gains?

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[17] The cy-près doctrine is a French legal term, which has its origins in the law of charitable trusts and translates to "as near as possible". This doctrine is typically applied in class action settlements in the US, when the original objective of the settlement becomes impossible or impracticable. This doctrine allows amendment of the terms to be as close as possible to the original intent. Wikipedia

[18] When Lennon won his precedent setting deportation appeal, after years of court battles against Nixon and the FBI, he received a Green card certifying permanent residency. When asked by the news media if he held a grudge against the Nixon administration, he responded with his usual cleverness stating that "time wounds all heels", as Nixon had been forced to resign under threat of impeachment a few years earlier. Wikipedia

I did some manipulation in my managed network switch with QoS to no real affect.

I undocked Laptop Two and did the test from the onboard Ethernet and it went from 259 to 949Mbps. Go figure. (all programs closed)

I swapped out the dock with a spare and it gave me a 948Mbps.

So that one is solved for now.

On Laptop One I am getting from 416-780Mbps. This one, while identical, has a newer dock which I thought was better. Newer is better right?

Actually, in further testing it turns out it was not the dock and it was Firefox.

Closed 949, Open 578.

Laptop One Firefox Open 725, Closed 664. Well that blows up that theory.

Repeated 366 Open and 664 Closed. Open 295. Nonsensical and erratic.

Laptop Two 713 Open and 932 Closed.

This is happening after the browser tabs are fully loaded.

I am shocked that an Open (but inactive) browser can cause a 700Mbps difference a speed test.

I think I need a better test methodology or I should maybe just give up on this nonsense. The real kicker here is that none of this seems to be repeatable and thus not helpful.

I guess I am just overly focused on sustainable and consistent speeds in this battle with Spectrum.

Further testing reveals that it is not Firefox, at least on the two laptops.

It is the browser extensions that are the variables here. Some combination of Ghostery, DDG Priv. Essen, Privacy Badger, JShelter.

On the desktop with Brave, it is something completely different and unknown at this point.

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Sunday, April 09, 2023 11:54 AM
To: 'Spectrum OP VP' <VPOP@charter.com>
Subject: Final Testing results

Attached

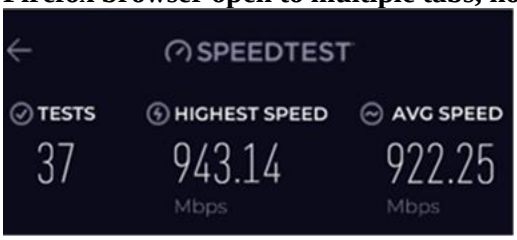
NUC Speedtest Results.csv (11 KB); Samsung Speedtest Results.csv (11 KB);
Surface Speedtest Results.csv (7 KB); Laptop Two Speedtest Results.csv (8 KB);
Laptop One Speedtest Results.csv (9 KB); Desktop Speedtest Results.csv (8 KB)

VP,
Attached are the promised tests I made since April 4.

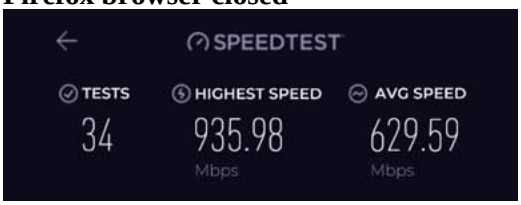
NOTE: there was no other activity on my network when these tests were recorded.
Detailed results attached exclusively from your Eau Claire test server.
I had to basically dedicate these three machines to testing to get these results.
This is what the three tests look like now from stripped down computers:

http://www.tcw.org/NUC Speedtest Results.pdf **http://www.tcw.org/Samsung Speedtest Results.pdf**
http://www.tcw.org/Surface Speedtest Results.pdf **http://www.tcw.org/Laptop Two Speedtest Results.pdf**
http://www.tcw.org/Laptop One Speedtest Results.pdf **http://www.tcw.org/Desktop Speedtest Results.pdf**

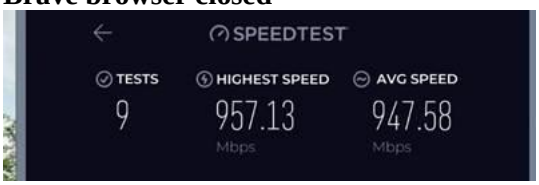
Intel NUC
Firefox browser open to multiple tabs, no extensions



Samsung Tablet
Firefox browser closed



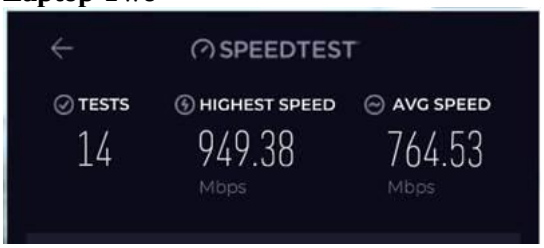
Surface Tablet
Brave browser closed



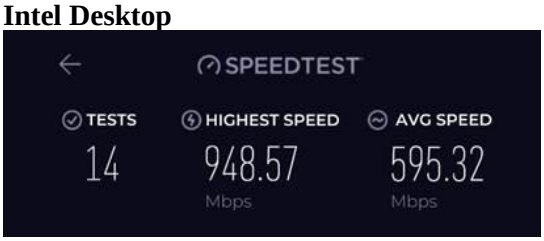
The next three represent daily working machines, however no streaming or web browsing occurred during these tests. They represent what I believe to be *actual working speed.*

Laptop One

Laptop Two



Intel Desktop



So where do we stand on getting me back to a stable 500Mbps plan at a reasonable monthly cost?
You are now selling 300Mbps for $49.99 per/m and throwing in Wi-Fi and phone service.
I should be able to get back to your 500Mbps service for $69.99 it would seem.
PS. A reminder that I never before had the necessary connection stability to be able to run these tests, until you fixed your network and I upgraded to your 1Gbps service provisioning.
Lefty

AT&T Fiber 1 GIG	1000 Mbps	$80.00
AT&T Fiber 2 GIG	2000 Mbps	$110.00
AT&T Fiber 5 GIG	5000 Mbps	$180.00

Spectrum Internet Plans

Plan	Speed	Starting Price (/mo.)
Spectrum Internet	Up to 300 Mbps	$49.99*
Spectrum Internet Ultra	Up to 500 Mbps	$69.99*
Spectrum Internet Gig	Up to 940 Mbps	$89.99*

*For 12 mos. Additional fees and terms may apply. Pricing varies by location and availability. All prices subject to change at any time. May or may not be available based on service address. Speeds may vary.

https://nationalbroadband.com/att-vs-spectrum/

Fine Print

At the end of the day, Spectrum's too-good-to-be-true prices are exactly that. All of Spectrum's advertising prices are only locked in for your first year of service, after which your monthly premium will increase. Additionally, while AT&T offers fiber Internet service, Spectrum's wide availability of service is only offered via a combination fiber and coaxial cable connection.

Finally, Spectrum has been regularly and repeatedly criticized by customers for its service and its customer support. In fact, Spectrum's low customer support ratings and its lack of unlimited data are what puts it at the bottom of our best Internet providers of 2023 list.

https://www.forbes.com/home-improvement/Internet/att-vs-spectrum/

Then a response from the complaint filed with the WI DATCP, including the response from a Charter lawyer:

From: Reinke, Shawn K - DATCP [mailto:ShawnK.Reinke@wisconsin.gov]
Sent: Monday, April 10, 2023 7:53 AM
To: lefty@tcw.org
Subject: FW: The Final Resolution of my Spectrum Internet Connection Issues 116518

Dear Lefty,
Correspondence has been received in regards to the complaint you filed. Please see the correspondence below for your review and response. Thank you.
Sincerely,
Shawn Reinke
Consumer Protection Investigator Sr– Mediation Unit
Division of Trade and Consumer Protection
Wisconsin Department of Agriculture, Trade and Consumer Protection
Phone: (608) 224-4535
Fax: (608) 224-4677
shawnk.reinke@wisconsin.gov

From: Regulatory. Complaints <Regulatory.Complaints@charter.com>
Sent: Sunday, April 9, 2023 5:33 PM
To: Reinke, Shawn K - DATCP <Shawnk.reinke@wisconsin.gov>
Cc: Regulatory. Complaints <Regulatory.Complaints@charter.com>
Subject: Re: The Final Resolution of my Spectrum Internet Connection Issues 116518
CAUTION: This email originated from outside the organization.
Do not click links or open attachments unless you recognize the sender and know the content is safe.

Ms. Reinke -
Thank you for forwarding this to our attention. Since the consumer confirms his issue has been resolved, we will not take any further action. However, we have forwarded his comments on to the proper teams for review.
Regards,
Bill
William C. Wesselman| Sr. Director, Law - Regulatory | Charter Communications, Inc.
6360 S Fiddlers Green Circle | Greenwood Village CO 80111

State of Wisconsin
Governor Tony Evers

Department of Agriculture, Trade and Consumer Protection
Secretary Randy Romanski

April 10, 2023

Mr. Lefty Insider lefty@tcw.org

RE: File 116518 (Refer to this number when contacting our agency)
Charter Communications Inc 6399 S Fiddlers Green Cir Attn: W.
Wesselman Greenwood Vlg CO 80111-4949

Dear Lefty Insider:

I received the enclosed response from Charter Communications Inc concerning the complaint you filed with our office.

I have recorded your complaint in our computer database, and it will be included in information provided to consumers who inquire about the business for a three-year period. It will also assist us in monitoring practices of the business community.

Thank you for bringing your complaint to our attention.

Sincerely,

Shawn Reinke Consumer Protection Investigator
Mediation Unit Bureau of Consumer Protection
Telephone: (608) 224-4535 FAX (608) 224-4677
Email: ShawnK.Reinke@wisconsin.gov

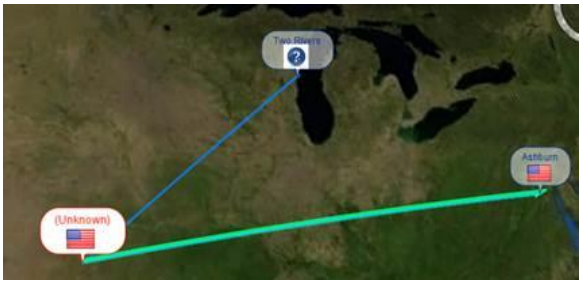
Enc: Response

And of course my response:

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Monday, April 10, 2023 10:42 AM
To: Reinke, Shawn K - DATCP <Shawnk.reinke@wisconsin.gov>
'Sen.Jacque' <Sen.Jacque@legis.wisconsin.gov>
Rep.Tittl <Rep.Tittl@legis.wisconsin.gov>
Subject: FW: The Final Resolution of my Spectrum Internet Connection Issues 116518
Shawn et al,
"I have to pay for more than what I need to get your promised speed."
I do not know how my language could be interpreted to mean that the issue has been *resolved.*
So a slightly better response in his attachment.
But was DATCP created to be a duplicate of the BBB?
Does Charter/Spectrum just get a bad mark on their semi-permanent record? Lefty

So I continued to trade phone messages and emails with the VP.

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Thursday, April 13, 2023 12:38 PM
To: 'Spectrum OP VP' <VP@charter.com>
Subject: Further Testing
VP,
After talking today, I did some more playing around.
I tried a traceroute to https://www.spectrum.com/internet/speed-test to try to find an IP address of your test server in Eau Claire so I could run a traceroute to that particular server without much luck. That URL cannot be pinged either.

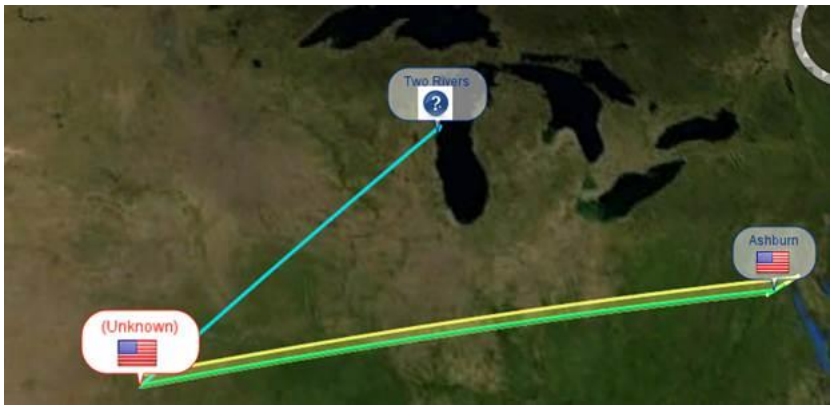


#		Country	Town	Lat	Lon	IP	Hostname	L...	DN...	Dis...
1		United States	(Unknown)	37.751	-97.822	96.34.25.20	lag-62-10.dtr01twrvwi.net...	15	45	0
2		United States	(Unknown)	37.751	-97.822	96.34.30.25	lag-204.crr01stptwi.netop...	16	42	0
3		United States	(Unknown)	37.751	-97.822	96.34.24.83	lag-400.crr01euclwi.neto...	21	40	0
4		United States	Ashburn	39.0469	-77.4903	96.34.2.153	lag-100.bbr01euclwi.net...	21	34	1775
5		United States	Ashburn	39.0469	-77.4903	96.34.0.7	lag-5.bbr02euclwi.netops...	25	39	0
6		United States	Ashburn	39.0469	-77.4903	96.34.0.9	lag-1.bbr01chcgil.netops....	41	34	0
7		United States	(Unknown)	37.751	-97.822	66.109.1.18	lag-300.chcgildt87w-bcr0...	34	205	1775
8		United States	(Unknown)	37.751	-97.822	66.109.0.229	lag-41.chctilwc00w-bcr0...	57	36	0
9		United States	(Unknown)	37.751	-97.822	66.109.10.99	lag-7.enwdcocd0aw-bar...	57	59	0
10		United States	(Unknown)	37.751	-97.822	66.109.10.101	lag-6.enwdcocd0aw-bar...	55	59	0
11		United States	(Unknown)	37.751	-97.822	66.109.6.113	ae-15.chcgill3-rtr1.kc.rr.com	60	81	0
12		United States	(Unknown)	37.751	-97.822	165.237.25.185	165-237-25-185.twcable....	69	145	0
13		United States	(Unknown)	37.751	-97.822	165.237.25.109	165-237-25-109.twcable....	58	118	0
14		United States	(Unknown)	37.751	-97.822	10.6.148.5	(None)	57	43	0
15		United States	(Unknown)	37.751	-97.822	142.136.168.58	(None)	61	67	0

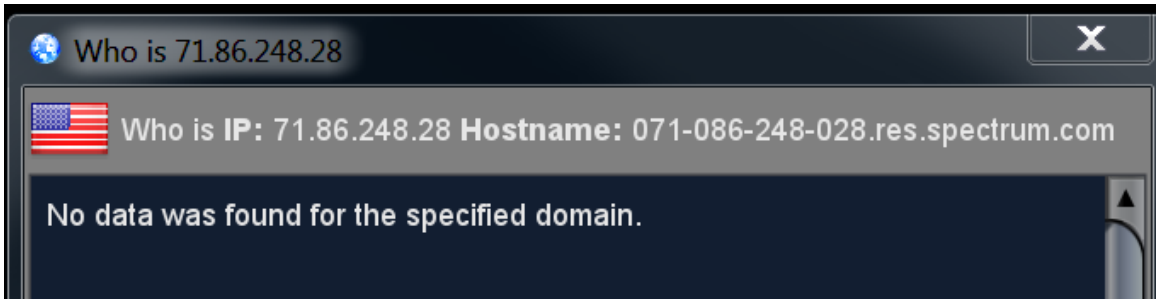
The traceroute ends at AKAMAI 23.2.88.254 which traceroutes as follows:

As does pinging or tracerouting Spectrum.com at 142.136.168.58.

So I am not sure that my packets are actually going geographically to Eau Claire, or just bouncing off some CDN edge server in Denver.
Tracerouting speedtest.spectrum.com before it redirects to https://www.spectrum.com/internet/speed-test shows this:



It ends at a Charter IP of 71.86.248.28 which after a trip to Ashburn, VA. ends up back in Denver.

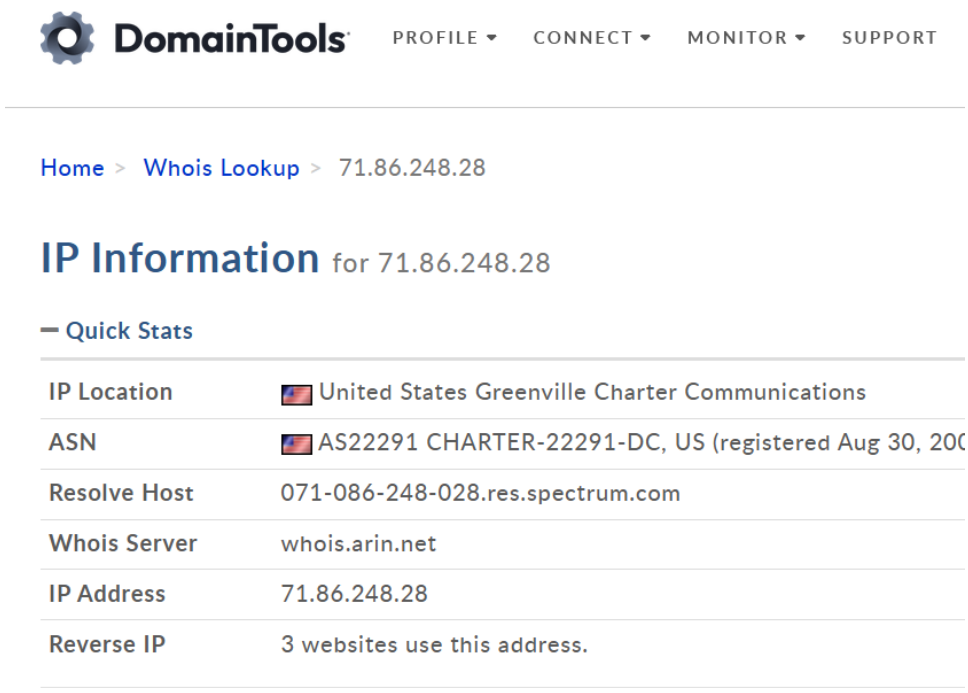


I am no network engineer but there is more going on here than what meets the eye.
Lefty

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Thursday, April 13, 2023 11:38 PM
To: 'Spectrum OP VP' <VP@charter.com>
Subject: RE: Further Testing addendum
VP,
To add an addendum to the end of this previous email:
Speedtest.spectrum.com pings as 71.86.248.28
IP2Location.com shows this IP as being geo-located in Atlanta, Georgia
Although that could just be where the IP was assigned or something.
https://www.ip2location.com/demo/71.86.248.28

C:\Users\ping speedtest.spectrum.com
Pinging speedtest.spectrum.com [71.86.248.28] with 32 bytes of data:
Reply from 71.86.248.28: bytes=32 time=69ms TTL=240
Reply from 71.86.248.28: bytes=32 time=69ms TTL=240
Reply from 71.86.248.28: bytes=32 time=70ms TTL=240
Reply from 71.86.248.28: bytes=32 time=69ms TTL=240

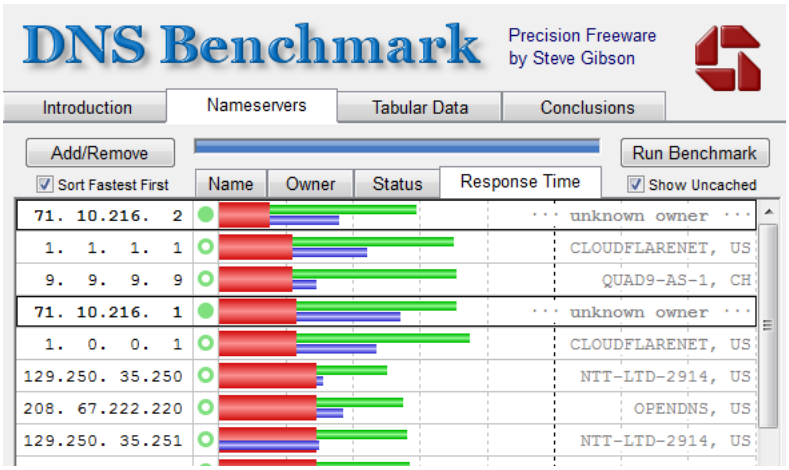
C:\Users\tracert 71.86.248.28
Tracing route to 071-086-248-028.res.spectrum.com [71.86.248.28]
over a maximum of 30 hops:
1 <1 ms <1 ms <1 ms 192.168.1.1
2Request timed out.
3 8 ms 15 ms 8 ms lag-62-10.dtr01twrvwi.netops.charter.com [96.34.25.20]
4 12 ms 12 ms 14 ms lag-204.crr01stptwi.netops.charter.com [96.34.30.25]
5 16 ms 17 ms 16 ms lag-400.crr01euclwi.netops.charter.com [96.34.24.83]
6 18 ms 18 ms 17 ms lag-100.bbr01euclwi.netops.charter.com [96.34.2.153]
7 17 ms 15 ms 23 ms lag-5.bbr02euclwi.netops.charter.com [96.34.0.7]
8 30 ms 31 ms 31 ms lag-1.bbr01chcgil.netops.charter.com [96.34.0.9]
9 30 ms 30 ms 31 ms lag-800.bbr02chcgil.netops.charter.com [96.34.0.67]
10 36 ms 35 ms 38 ms lag-2.bbr01olvemo.netops.charter.com [96.34.0.13]
11 36 ms 45 ms 36 ms lag-3.bbr01blvlil.netops.charter.com [96.34.0.15]
12 68 ms 63 ms 63 ms lag-806.bbr01atlnga.netops.charter.com [96.34.0.36]
13 74 ms 71 ms 71 ms lag-804.bbr01spbgsc.netops.charter.com [96.34.0.185]
14 70 ms 69 ms 69 ms lag-8.sar02gnvlsc.netops.charter.com [96.34.0.111]
15 71 ms 70 ms 70 ms dsw01br15bg-bue-600.gnvl.sc.charter.com [96.34.0.125]
16 72 ms 69 ms 70 ms 071-086-248-028.res.spectrum.com [71.86.248.28]
Trace complete.



So I do not yet really know where your Eau Claire speed test server calls home, or exactly what the routes are to it.
Lefty
End Addendum

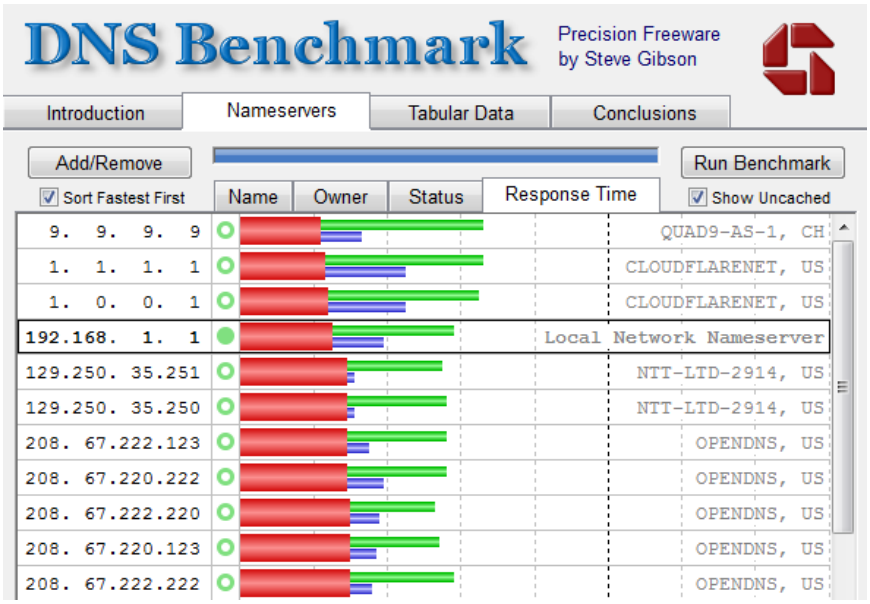
From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Thursday, April 13, 2023 11:47 PM
To: 'Spectrum OP VP' <VPOP@charter.com>
Subject: FW: DNS
VP,
So I have been playing with DNS and testing it.
Based on what I know, DNS should not impact the Ookla speedtest program, but only webpage draw/load when browsing etc.
But I have had some test experiences that seem to conflict with that assumption.
Changing the DNS from the default to OpenDNS on the Samsung improved the test speed
Eliminating the hosts file on Laptop One improved the speed test

Originally, I was given two different sets of DNS servers to use, at different times, from Spectrum.
71.10.216.1
71.10.216.2
In testing, the first and fourth were the fastest, with .2 being faster than .1 (not what you would think)



And: (these are on the same subnet as my router)
24.240.111.1
24.240.111.19

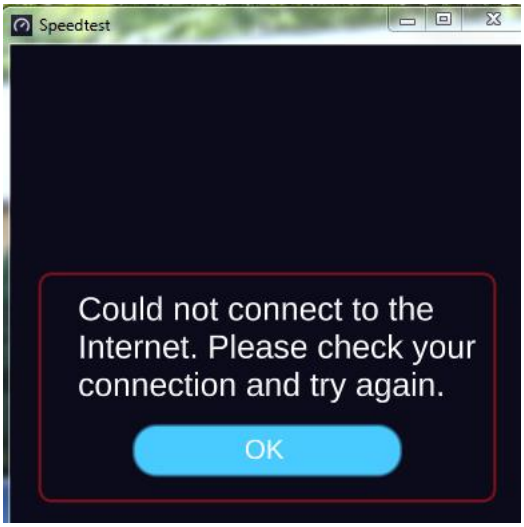
I typically use OpenDNS (208.67.220.220 (222) now because it is fast but also **does filtering**. (do not know if Charter does this)
If I tell the network adaptor to automatically obtain DNS from Spectrum, it just shows my private router LAN IP. Not sure what Spectrum is giving me for IP's, but shows up as fourth fastest.

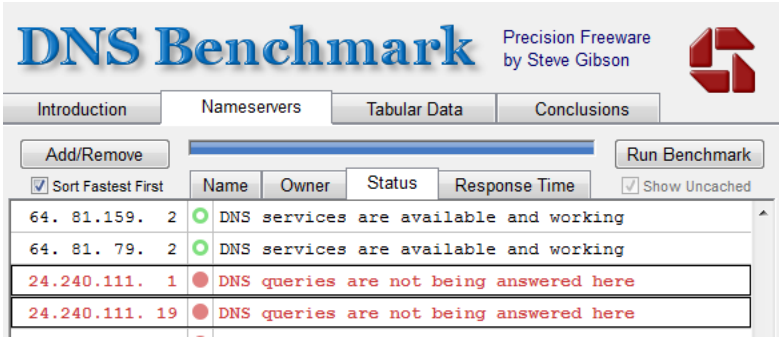


Not sure quite yet what to make of all this just yet,
Lefty

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Friday, April 14, 2023 10:58 AM
To: 'Spectrum OP VP' <VP@charter.com>
Subject: Yet even more Further Testing addendum

Continuing to play…
Spectrum gave me another set of DNS addresses to use back five years ago:
These are on the same subnet as my modem.
24.240.111.1
24.240.111.19 (odd that this is not the typical consecutive number)
Speedtest will not function with these DNS servers, but web browsing does work. Go figure.
So there **is apparently a connection** between DNS servers and speed tests which does not impact browsing.





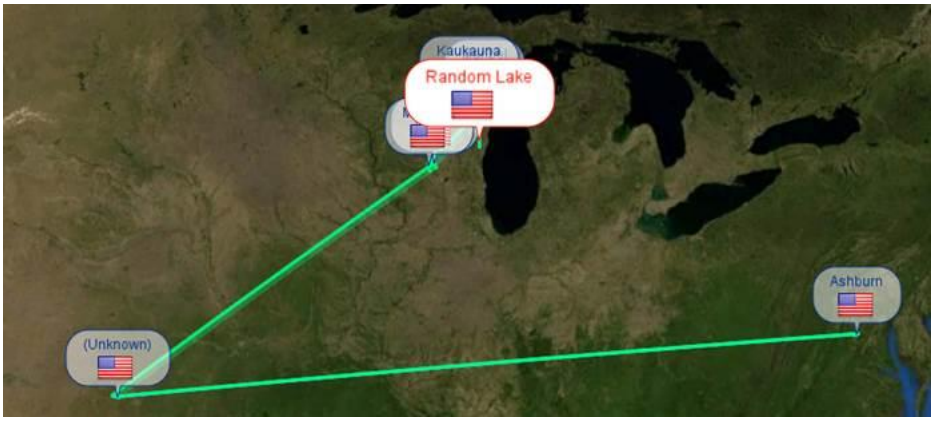
Lefty

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Saturday, April 15, 2023 8:19 AM
To: 'Spectrum OP VP' <VPOP@charter.com>
Subject: Some interesting testing factoids
VP,
Additional odd things about speed testing.
Speedtest.net
https://www.speedtest.net/result/14613140083

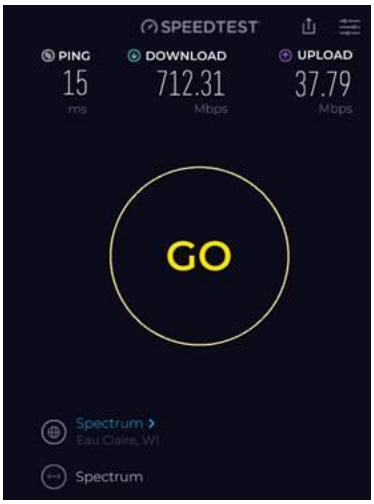
Speedtest program

Assumedly the same speed test server, these tests were done at near the same timeframe.
bertramwireless.com translates to 173.242.94.86 https://www.ip2location.com/demo/173.242.94.86

And actually does trace route geographically to Random Lake, unlike your Spectrum site.



The reason I use this test site is because two years ago, your techs did all their testing to this site. They all said (five of them here in my house) that the Spectrum site was no good, and to use Random Lake. This site provided far better results than to anywhere else, btw.
Flash forward to now, they all want to use the Spectrum site. Curious.
So same machine same timeframe your Eau Claire site gives this:



And continues to trace route to Denver, by way of Ashburn.

So as they say, I do not understand all I know about this.
Seems that Eau Claire is actually Denver, unless I am using the wrong IP address.
And for some reason now, in 2023, the Random Lake site speeds suck.
Am still not convinced your network is delivering your advertised speed.
I do not assume nefarious intent, but someone is not saying all they know about this here,
Lefty

Before I continue this slide down the Spectrum trough of disillusionment, rather than just hitting the

Key, or hitting the

Key, perhaps it is now time to instead hit the

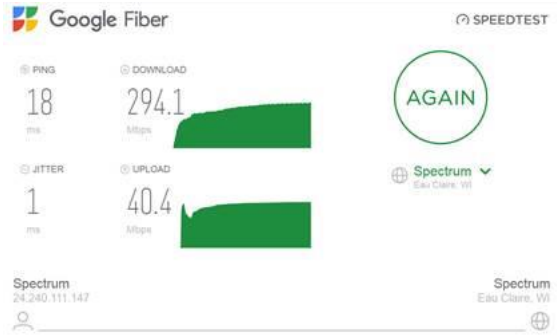
Button and go back

Rip the scab from the scar tissue, to see what is really happening here.

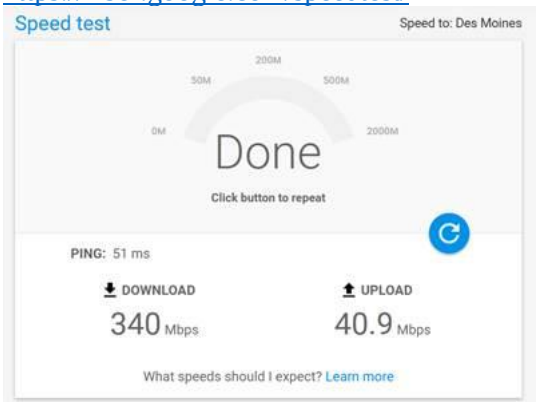
Or perhaps I could talk to an AI

Or maybe I could just take a blue chill pill… but nah!

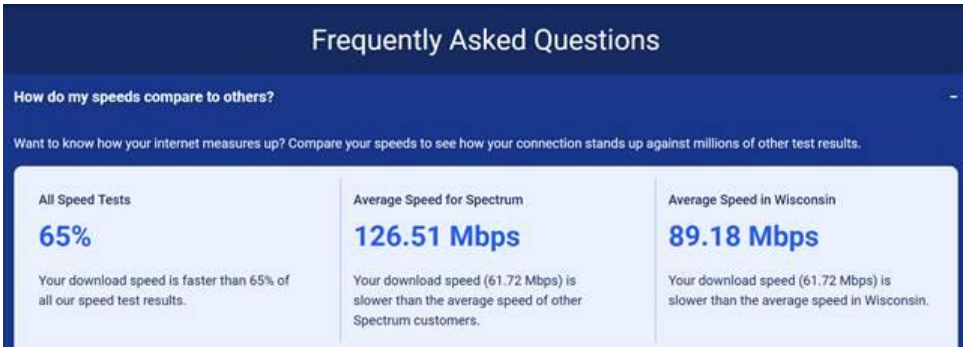
From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Friday, April 21, 2023 8:03 AM
To: ', Spectrum OP VP' <VPOP@charter.com>
Subject: High speed testing
VP,
Decided to play around more on **only high speed test sites** since my last email.
I did these with Laptop One.
Did you change my provisioning to back to 500Mbps?
I cannot seem to crack that speed now.
Lefty



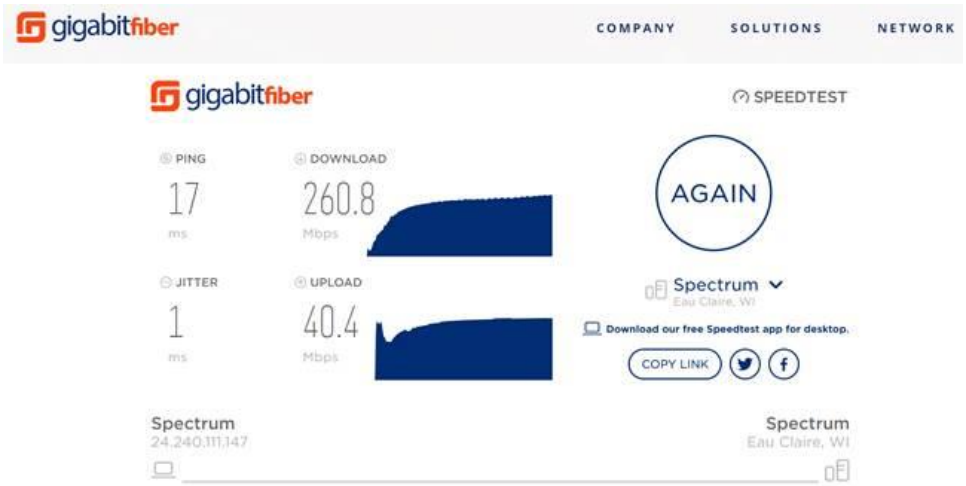
https://fiber.google.com/speedtest/



http://speedtest.googlefiber.net/



https://www.highspeedinternet.com/tools/speed-test (this is MLabs)



https://gigabitfiber.com/speed-test/

By way of comparison, I got almost 500Mbps at the same time today with this:

In a perfect world, I would really want this:

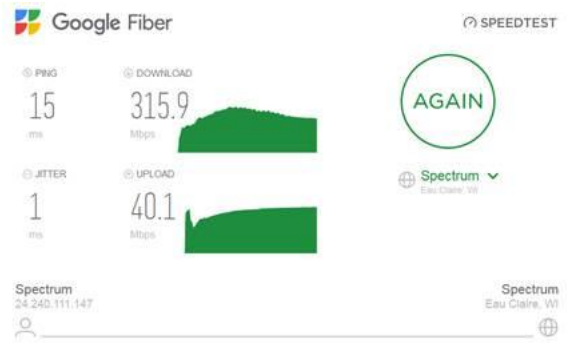
From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Thursday, April 20, 2023 8:00 AM
To: 'Spectrum OP VP ' <VPOP@charter.com>
Subject: RE: [EXTERNAL] Things

VP,
Ok, I will be interested in discovering where my testing to Eau Claire is actually going.
Lefty

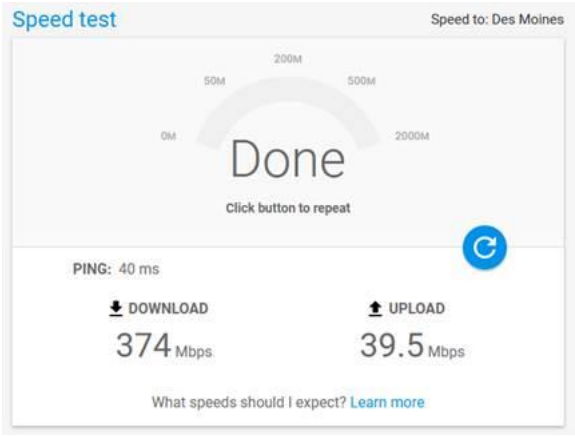
From: Spectrum OP VP [mailto: VP@charter.com]
Sent: Wednesday, April 19, 2023 1:02 PM
To: Lefty Insider <lefty@tcw.org>
Subject: RE: [EXTERNAL] Things
Lefty,
I am waiting to hear back from the IP engineering department to see what we can determine about your issue. Hope to hear back by end of the week.
VP

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Friday, April 21, 2023 8:09 AM
To: 'Spectrum OP VP' <VPOP@charter.com>
Subject: More high speed testing

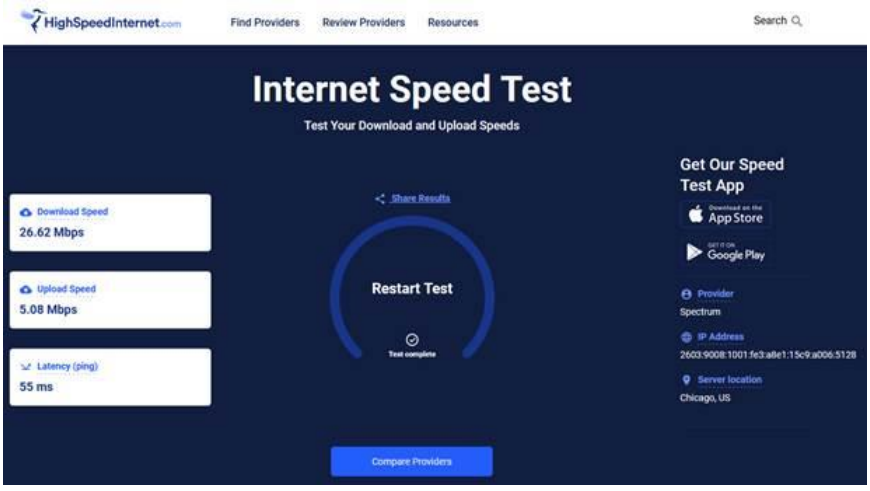
Repeated the same tests in the same order from the NUC later that same evening 10PM.

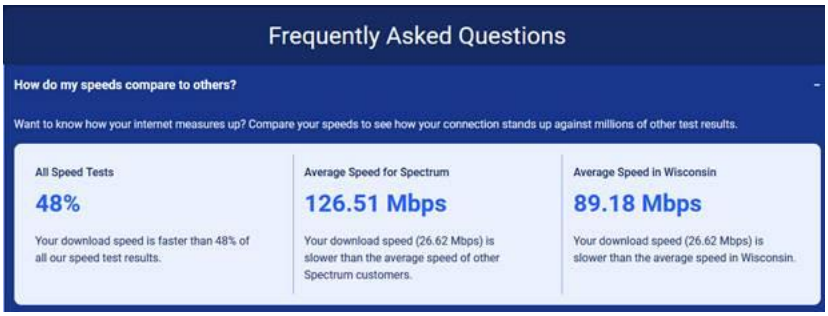


https://fiber.google.com/speedtest/

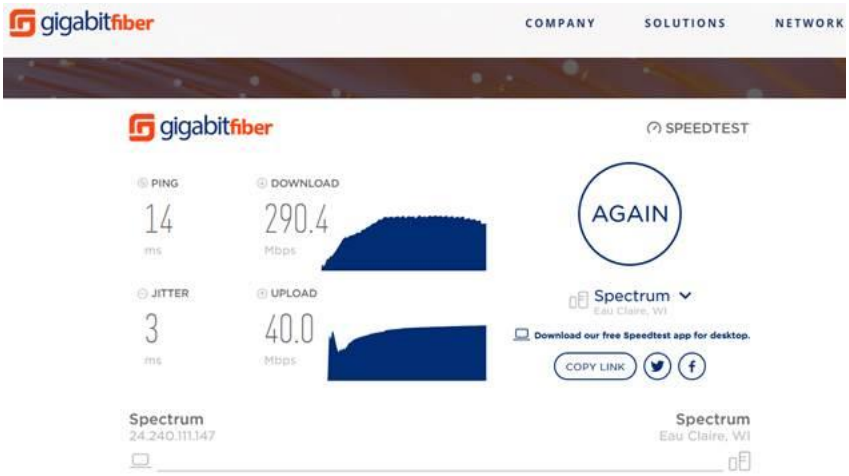


http://speedtest.googlefiber.net/

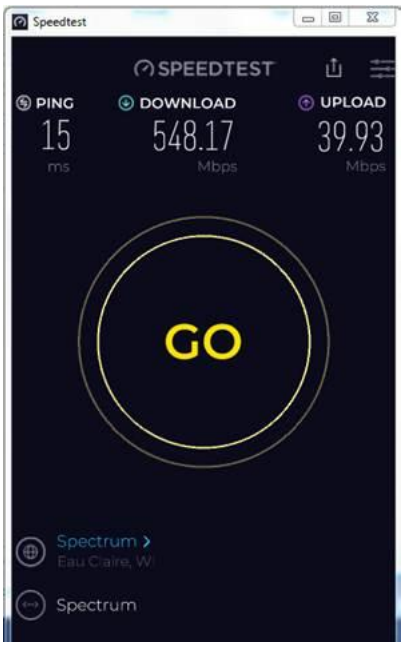


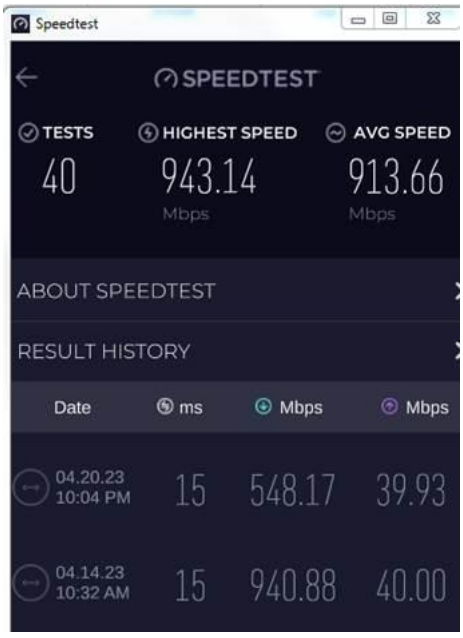


https://www.highspeedinternet.com/tools/speed-test



https://gigabitfiber.com/speed-test/





From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Friday, April 21, 2023 8:43 AM
To: 'Spectrum OP VP' <VPOP@charter.com>
Subject: RE: [EXTERNAL] More high speed testing
VP,
Rebooted the modem and router.
From the Spectrum Eau Claire test site just got these readings:
Laptop One 566
Laptop Two 940
Desktop One 500
NUC 813

Lefty

From: Spectrum OP VP [mailto: VP@charter.com]
Sent: Friday, April 21, 2023 8:15 AM
To: Lefty Insider <lefty@tcw.org>
Subject: RE: [EXTERNAL] More high speed testing

Looks like you are subscribed to Gig speeds. Interesting that you are not able to get close to that on any test. This seems to be a slightly different issue than you were experiencing last week.
Did anything change on your end?

Shortly after this, I received a clipped voice mail from Spectrum as near as I can tell about returning some equipment. They provided a wrong account number, so I am unclear what this is about, and am not really interested in finding out. I did call the number that they claimed was 24x7, 365, and the recorded message said to call back during business hours.

Then they sent me the following letter in the mail.
Note the disclaimer about damaging my property.

No sooner that I had written these words, and on a Sunday, a young skinny red-headed GenZ'er in a Spectrum t-shirt rang my doorbell and announced that he was here to bury my Spectrum cable. No need for Diggers Hotline he said, he would bury it by hand six inches deep. He would need to run a new cable as the existing one installed by Spectrum was too short, and he would run it underneath my curbing and landscaping. A Spectrum tech would come later and hook the new one up to my connection, he said. He was here an hour or so, and we had a nice chat while he worked. So Spectrum knows about outsourcing work anyway. Too bad they caused another truck roll by trying to save the cost of six feet of cable.

Spectrum

AN IMPORTANT UPDATE FROM SPECTRUM
See below

April 18, 2023
Mr. Lefty Insider

Dear Customer,

As you know, there is a cable line above ground on your property, and we want to keep you informed of our plan to bury your cable. We are working diligently to ensure that all lines installed over the winter months are buried prior to May 31st. In the meantime, this line has no electric voltage going through it, and can be easily moved while doing yard work. If you are planning to sod, landscape, or install a sprinkler system, etc., we ask that you wait until your cable is buried. This will ensure that your cable can be buried to a maximum depth without causing damage to your new installation.

As your scheduled bury date approaches, we will contact the State Utility Locate Service to locate where this line will be buried. The utility companies use either paint sprayed on the ground or small colored flags. Power lines are marked in red, telephone and cable lines in orange, gas lines in yellow and water lines in blue. These paint marks are temporary, and meant to protect *public* utilities from being cut or damaged. After all utilities have been marked we will bury the cable line.

IMPORTANT

Any privately owned utilities will not be marked by the State Utility Locate Service process, and it is your responsibility to accurately mark their placements. Examples of private utilities that require a diagram might be, but are not limited to, the following: electric dog fence, gas line, septic or water, power lines, sprinkler system. Spectrum cannot be responsible for any damage occurring to unmarked, or inaccurately marked, services which may need repair following the cable bury.

We appreciate your patience and cooperation during this time, and will do our best to complete your bury without delay or complication. If you have any questions or concerns, call us at **855-757-7328**. We are available 24 hours a day, seven days a week. Thank you for being a Spectrum customer.

Sincerely,

Spectrum

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QRG 177288 04/18/23

So after that cable diversion, back on the track of the speed tests, let us again refer to our old friend ChatGPT:

LE

Why do my speed tests vary From the Spectrum Eau Claire test site just got these readings:
Laptop One 566
Laptop Two 940
Desktop One 500
NUC 813

There could be several reasons why your speed tests vary from the Spectrum Eau Claire test site. Here are a few possibilities:

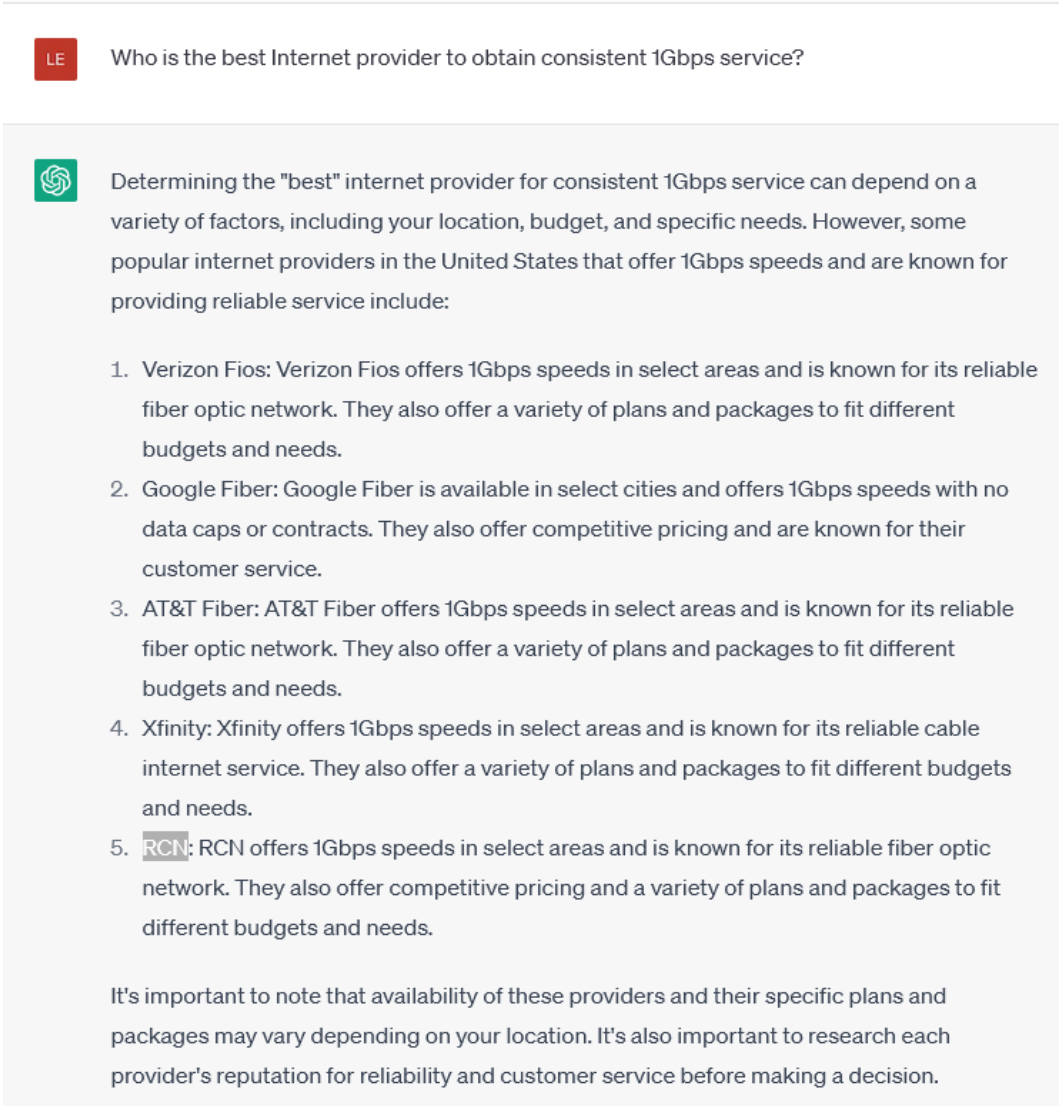
1. Device Differences: Each device has its own hardware and software specifications, which can affect the speed test results. For example, a newer laptop with a faster processor and more memory may perform better on a speed test than an older laptop with a slower processor and less memory.
2. Network Congestion: Internet speed can vary depending on the time of day and how many people are using the network at the same time. If there are a lot of people using the network in your area, it could cause congestion and slow down your internet speed.
3. Distance from the Test Server: Internet speed can also be affected by how far away you are from the test server. If you are located far away from the Spectrum Eau Claire test site, it could take longer for the test data to travel between your device and the test server, which could affect your test results.
4. Network Configuration: Your internet speed can also be affected by your network configuration, such as your router settings or firewall. If your network is configured to prioritize certain types of traffic, it could affect your speed test results.

It's also worth noting that speed tests can sometimes be affected by other factors outside of your control, such as temporary network outages or server issues. If you're consistently experiencing slow internet speeds, it may be worth contacting your internet service provider to investigate the issue further.

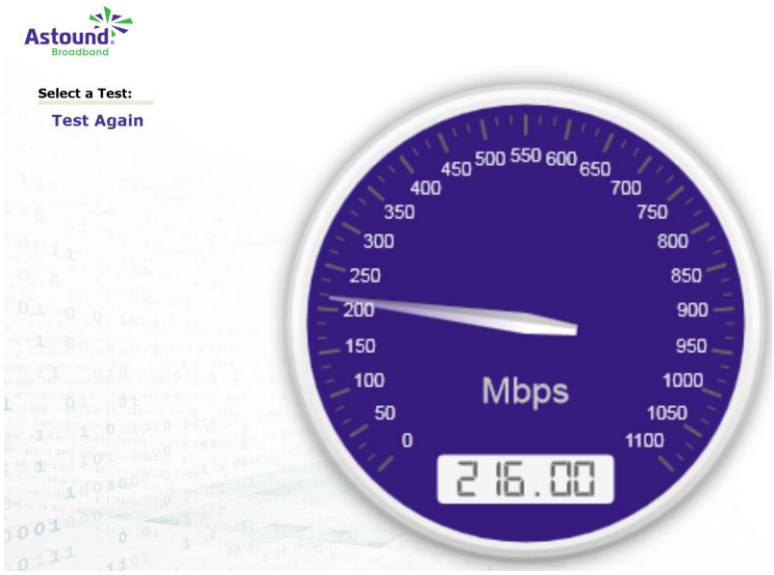
- So as to possibility number one, each of my devices has shown the capability of achieving the advertised speed, it just cannot do it on a regular or consistent basis. A side note here: a Spectrum engineer offered this analogy when this question was posed to him. “So it’s like a marathon runner who on the day after the marathon cannot run as fast as the day before”. I just shook my head and decided not to educate him on the differences between animate and inanimate objects. It is our public education system that should perform this roll, and apparently has failed in his case. Or perhaps he skipped science class the day they discussed this concept.

- As to possibility number two, Spectrum tells me that my node is at less than 50% capacity, and I have run these tests on different days and times that should eliminate this possibility.
- As to possibility number three, despite the speed test program wanting to select a server closer to me than Eau Claire, I have been able to consistently test against this one site.
- As to possibility number four, having a large number of computers to use for testing against one router rules out this possibility as well.

So back to the AI:



So I had not heard of RCN, but stumbled across it by accident. They do provide service in Illinois and Michigan but unfortunately not Wisconsin. So what the heck I ran a speed test while I was there.



From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Wednesday, April 26, 2023 8:57 AM
To: 'Spectrum OP VP' <VPOP@charter.com>
Subject: FW: Update
VP,
So I woke up this morning to Digger's Hotline flags in my yard, two days _*after*_ the cable was already buried. Good thing the cable installer decided to leave his trenching machine on his trailer.
So Spectrum is not as much of a finely tuned outsourcing machine, as I had first thought.
Lefty

From: Spectrum OP VP [mailto: VP@charter.com]
Sent: Wednesday, April 26, 2023 9:03 AM
To: Lefty Insider <lefty@tcw.org>
Subject: RE: [EXTERNAL] FW: Update
Unfortunately it seems our Locate contractor (USIC) did not get the cancel order post the drop was hand buried. Sorry for the process glitch and flags in your yard.

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Wednesday, April 26, 2023 9:17 AM
To: 'Spectrum OP VP' <VPOP@charter.com>
Subject: RE: [EXTERNAL] FW: Update
VP,
No worries, I'll figure out something to use the flags for.
Just reminds me that there is nothing so simple it can't be screwed up. See below.

PS. Upon further examination, they marked the gas and electric lines but failed to mark the phone line. Not using it now, but who know when I might want to hear a modem squeal again. ☺
Lefty

Stupid is as stupid does.

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Thursday, April 27, 2023 9:45 AM
To: 'Spectrum OP VP' <VPOP@charter.com>
Subject: Shipping Confirmation
VP,
After spending multiple calls on multiple days with your Cust. Support and modem return people, I am overwhelmed with the incompetence.
From confusing UPS with FedEx, to not knowing how I can return this, to answering the phone as Comcast, clearly a vendor here, this is a simple example of why your customer service ratings continue to be so low.
So I was confidently assured yesterday that they **could not** email me a return shipping label, it must come postal mail, and going through the hassle with them regarding my PO Box, because I get this below today.
Talking to your people is like a ChatGPT hallucination.
I have no FedEx drop-off near me, just the PO and UPS.
Rural America does not have a UPS store or FedEx drop-off around every corner,
Lefty

From: Spectrum [mailto:MyAccount@spectrumemails.com]
Sent: Wednesday, April 26, 2023 5:44 PM
To: lefty@tcw.org
Subject: Shipping Confirmation

Shipping Confirmation

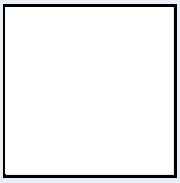
Hello Lefty,

We have good news. Your equipment has left our warehouse. You'll soon be enjoying all of the value and convenience of Spectrum service in your home.

Your Order Is on the Way

Order Number:
UCM66954475
Expected Delivery Date:
April 27, 2023
FedEx Tracking:
Tracking information is generally available within 24-48 hours.

Account Number:
Ending in 7227
Service Address:



What's Inside the Box

Equipment	Serial Number
EMPTY BOX KIT	

Installation instructions are included in your shipment.

Please do not reply to this message. Replies to this message are routed to an unmonitored mailbox. If we can be of further assistance, please visit Spectrum support.
This email was sent to: lefty@tcw.org. If you received this email in error, please let us know.
©2023 Charter Communications. All rights reserved | Privacy Policy. This message was sent by Charter Communications.

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Thursday, April 27, 2023 10:47 AM
To: 'Spectrum OP VP' <VPOP@charter.com>
Subject: FW: [EXTERNAL] FW: Lefty Insider, changes have been made to your account
Ideally this would be a USPS label as most everyone has a post office near them.

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Thursday, April 27, 2023 10:35 AM
To: 'Spectrum OP VP' <VPOP@charter.com>
Subject: RE: [EXTERNAL] FW: Lefty Insider, changes have been made to your account
"We can look at adding an option where you can provide a box and get a mailing label emailed if so desired. I will see what I can find out adding that option."

Well, I just happened to have two existing modem boxes because of all this mess the last few years.
Emailing a label, ala Amazon, would save you money and not piss off your customers.
Lefty

From: Spectrum OP VP [mailto: VP@charter.com]
Sent: Thursday, April 27, 2023 10:10 AM
To: Lefty Insider <lefty@tcw.org>
Subject: RE: [EXTERNAL] FW: Lefty Insider, changes have been made to your account

Thanks for the extra efforts to return the modem. I reviewed the standard process and it looks like you should be receiving a mailing label as well as a box to use for shipping. I think as we include the box for those outside of the footprint of a UPS Owned store area to make the entire process easier but also prevent us from just sending a mailing label digitally. If you had access to a UPS owned store then dropping the unit off is all you would need to do.
We can look at adding an option where you can provide a box and get a mailing label emailed if so desired. I will see what I can find out adding that option.
VP

From: Lefty Insider <lefty@tcw.org>
Sent: Thursday, April 27, 2023 10:05 AM
To: Spectrum OP VP <VP@charter.com>
Subject: [EXTERNAL] FW: Lefty Insider, changes have been made to your account

CAUTION: The e-mail below is from an external source. Please exercise caution before opening attachments, clicking links, or following guidance.

VP,
Well I was able to intercept the FedEx driver and he was kind and competent enough to allow me to put the modem in his empty box and send it back.
So as long as you have a competent and clever customer and FedEx driver, we can jointly overcome Spectrum's incompetence and ignorance. Adapt and improvise is what we called it in the Army as I recall.
Lefty

From: Spectrum [mailto:spectrum@customeremailnotifications.com]
Sent: Wednesday, April 26, 2023 4:55 PM
To: lefty@tcw.org
Subject: Lefty Insider, changes have been made to your account

See inside for details >

Changes Have Been Made To Your Account

Dear Lefty Insider

Thank you for choosing Spectrum! This message is a confirmation of recent changes to your account. Your billing address was changed. If you did not request these changes, please have the primary account holder contact a Spectrum Representative at **1-855-70-SPECTRUM** (1-855-707-7328).

STAY SAFE WITH SPECTRUM

The My Spectrum App allows you to personalize your Wi-Fi network, manage all user profiles associated with the account, securely pay bills, update billing information and more right from your iOS or Android phone or tablet. The app is available for download from your device's app store. For additional tools and solutions to keep you and your family safe when connected, visit Spectrum.net/SecurityCenter.

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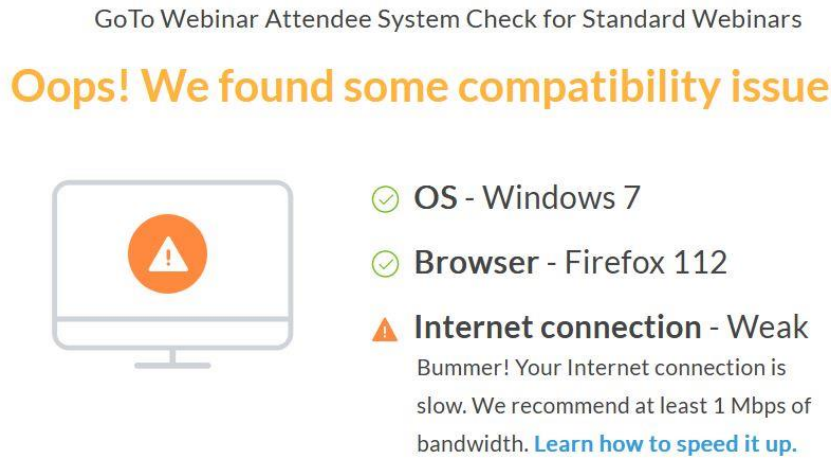
Meanwhile, pulling myself away from a video podcast, I tried to tune in to a webinar. Really? You cannot even find just **1** single solitary Mbps in my promised 1000, err 940?



From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Thursday, April 27, 2023 2:07 PM
To: 'Spectrum OP VP' <VPOP@charter.com>
Subject: RE: Delivery Confirmation

So this is the announcement of the arrival of my empty box a few hours later.
Btw, the tracking links never work on these emails.
It just goes on and on…

From: Spectrum [mailto:MyAccount@spectrumemails.com]
Sent: Thursday, April 27, 2023 12:56 PM
To: lefty@tcw.org
Subject: Delivery Confirmation

Delivery Confirmation

Hello Lefty,
Your equipment has arrived. You can begin to enjoy everything that your services have to offer in just minutes.

Please do not reply to this message. Replies to this message are routed to an unmonitored mailbox. If we can be of further assistance, please visit Spectrum Support.
This email was sent to: lefty@tcw.org. If you received this email in error, please let us know.
©2023 Charter Communications. All rights reserved | Privacy Policy. This message was sent by Charter Communications.

Meanwhile…

From: FCC [mailto:consumercomplaints@fcc.gov]
Sent: Friday, April 28, 2023 7:46 AM
To: Lefty Insider <lefty@tcw.org>
Subject: [FCC Consumer Inquires and Complaints] Re: Spectrum Internet

##- Please type your reply above this line -##
This ticket (#6123084) has been updated.
Hi Lefty,
Thank you again for your submission to the FCC. The FCC's role in this process is to facilitate a conversation between you and your provider. We received a response from your provider to your Ticket No. 6123084.
Here's what happens next:
- Your provider is required to send you a written copy of its response. Keep in mind, If the carrier sends the response by postal mail, it could take up to 10 days for you to receive the response.
- Please review your provider's response. If the issues you raised in your ticket remain unresolved, you can reply directly to this email with a short description of the problem.
- Keep in mind that billing adjustments or other actions by your provider could take time to implement.
- If we do not hear from you within 30 days, your ticket will be closed.
- If you have new issues with your provider, you can file an additional complaint by going to: consumercomplaints@fcc.gov
This email is a service from FCC Consumer Inquires and Complaints.

So I need to wait for a snail mail?
Actually no, I did not as I received this email shortly after.

From: FCC [mailto:consumercomplaints@fcc.gov]
Sent: Friday, April 28, 2023 1:23 PM
To: Lefty Insider <lefty@tcw.org>
Subject: [FCC Consumer Inquires and Complaints] Re: Spectrum Internet

##- Please type your reply above this line -##
This ticket (#6123084) has been updated.
Hi Lefty,
Here is the response we received from your carrier.
Thank you,
FCC Consumer Complaints
This email is a service from FCC Consumer Inquires and Complaints.

Charter
COMMUNICATIONS

April 26, 2023

SUBMITTED VIA FCC WEB PORTAL
Consumer Inquiries and Complaints Division FCC –
Consumer & Governmental Affairs Bureau 45 L
Street NE Washington, DC 20554

RE:	Notice of Informal Complaint Complainant:	Mr. Lefty Insider
	FCC Serve Ticket Number:	6123084
	Ticket Serve Date:	March 28, 2023

Dear Sir/Madam:

Charter Communications, Inc. ("Charter") hereby submits its response in the above-referenced matter.

Mr. Insider states that he has experienced ongoing Internet service issues. On March 29, 2023, a representative contacted Mr. Insider to discuss his concerns. The representative and Mr. Insider discussed in detail the issues with his service. It appears that his "Zone Alarm" firewall played a major role in his inconsistent speeds. However, we are unable to pinpoint specifically what ultimately resolved the issue. Mr. Insider confirmed that his service has been operating at the expected level, and direct contact information was provided to him should he have any future concerns.

Please do not hesitate to contact us if you have any questions.

Respectfully submitted,
/s/ William C. Wesselman Sr.
Director, Law -Regulatory

cc: Mr. Lefty Insider

888.GET.CHARTER
www.charter.com
6360 S. Fiddler's Green Circle
Greenwood Village CO 80111

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Monday, May 01, 2023 11:03 AM
To: 'FCC' <consumercomplaints@fcc.gov>
Subject: RE: [FCC Consumer Inquires and Complaints] Re: Spectrum Internet
FCC,
This letter reflects an incomplete understanding of this currently ongoing situation and complaint.
While improved, nothing has been resolved as of yet.
The situation remains actively under investigation.
See below message from a Spectrum OP VP working on this issue.
Lefty

From: Lefty Insider [mailto: VP@charter.com]
Sent: Monday, April 24, 2023 9:20 AM
To: Lefty Insider <lefty@tcw.org>
Subject: RE: [EXTERNAL] Update
Lefty,
I hope to hear a response on the variable speed issue early this week. I believe I have a path to get it analyzed at the vary least.
They may ask to try to verify your premise using some additional test equipment and will keep you posted.
VP

From: FCC [mailto:consumercomplaints@fcc.gov]
Sent: Friday, April 28, 2023 1:23 PM
To: Lefty Insider <lefty@tcw.org>
Subject: [FCC Consumer Inquires and Complaints] Re: Spectrum Internet

That message brought this hopeful response from the FCC.

From: FCC [mailto:consumercomplaints@fcc.gov]
Sent: Monday, May 01, 2023 2:46 PM
To: Lefty Insider <lefty@tcw.org>
Subject: Request updated: Spectrum Internet
##- Please type your reply above this line -##

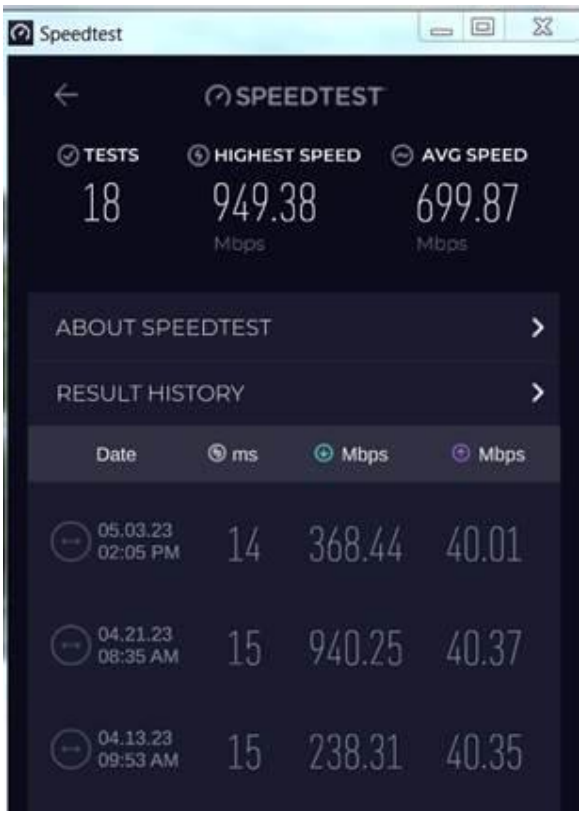
Hi Lefty,
Thank you for your submission. Based on our review of the provider's response to your Ticket No. 6123084, we are asking your provider for a supplemental response to your issue.
Here's what you can expect from the FCC's informal complaint process:
-Your provider may contact you directly to resolve your issue.
- The FCC's role in this process is to facilitate a conversation between you and your provider.
-Your provider is required to submit to the FCC a written supplemental response regarding your issue no later than 14 days from today.
- The FCC will not contact you until we receive a supplemental response from your provider.
You can view a list of frequently asked questions about the informal complaint process at: https://consumercomplaints@fcc.gov/hc/en-us/articles/205082880. This email is a service from FCC Consumer Inquires and Complaints.

From: Spectrum OP VP [mail to: VP@charter.com]
Sent: Wednesday, May 03, 2023 1:39 PM
To: Lefty Insider <lefty@tcw.org>
Subject: RE: [EXTERNAL] RE: Delivery Confirmation

Gaining some traction on the “hops” / “Speed” concern. May know more by the end of the week. How have your results been recently?

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Wednesday, May 03, 2023 2:12 PM
To: 'Spectrum OP VP' <VPOP@charter.com>
Subject: RE: [EXTERNAL] RE: Delivery Confirmation

Erratic, although I have not been really testing much lately, too busy.
Just tested laptop two now since you asked. Ran a second test (both Eau Claire) and got 313.
Waiting to hear (see) some good news,
Lefty



From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Wednesday, May 03, 2023 3:25 PM
To: 'Spectrum OP VP' <VPOP@charter.com>
Subject: RE: [EXTERNAL] RE: Delivery Confirmation
VP,
I do not have any hope of communicating this to your 800 number agents, so I thought I would tell you.
The original live cable is still laying on the ground here, and I will need to mow soon.
What I would like the Spectrum tech to do when he appears, is to connect the newly buried dark cable to a demark location box, as the phone company calls it.
Rather than just running the cable through the hole in the wall, put a box there at the same height as the phone company box, and connect the buried cable inside and then connect the existing cable, which is now going through the wall, also inside the box. He will need to supply some plastic conduit, elbows, and the box to make this look nice and keep it out of the rain splash from the roof rake edge.
This also means that I do not have to be here to let him into the basement to disconnect and reconnect the cable.
Hope this is clear enough,
Lefty

I would expect it to look more like this: (with the conduit however)

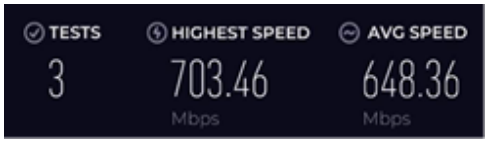
and less like this:

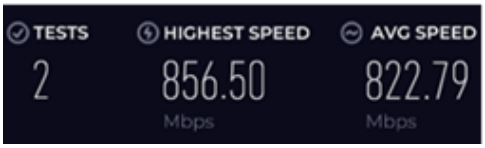
From: Spectrum OP VP [mailto: lefty@tcw.org]
Sent: Thursday, May 04, 2023 8:44 AM
To: 'Spectrum OP VP' <VPOP@charter.com>
Subject: RE: [EXTERNAL] RE: Delivery Confirmation
VP,
Just got my May bill. $99.99
Lefty

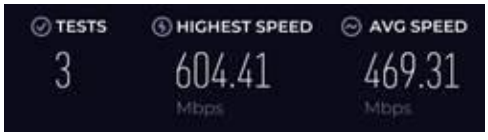
From: Spectrum OP VP [mailto: VP@charter.com
Sent: Thursday, May 04, 2023 9:39 AM
To: 'Lefty Insider' <lefty@tcw.org>
Subject: RE: [EXTERNAL] RE: Delivery Confirmation
Is that $10 more than expected?

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Thursday, May 04, 2023 9:39 AM
To: 'Spectrum OP VP' <VPOP@charter.com>
Subject: RE: [EXTERNAL] RE: Delivery Confirmation
VP,
Ten more than last month, as the performance has degraded.
Expected?
If billing and customer service were connected, rather than separate entities, my _*expected*_ billing would be $69.99.
This is what I was paying for 300Mbps, which is what I appear to have now, with occasional higher temporary fluctuations.
Lefty

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Friday, May 05, 2023 10:36 AM
To: 'Spectrum OP VP' <VPOP@charter.com>
Subject: Speed and cable install
VP,
Where are we on the erratic and inconsistent speed issue?
I also noticed variances in the upload speed as well, from 37 to 42. Historically this has always been rock solid.







So The Tech came out from Green Bay yesterday to finish the cable job. Thanks for the prompt response.
I chose not to interfere with his installation process, as I do not know what your standard practices are, but I will critique it.
I suspect that you have some corporate standards as to how this should be done, but if I were doing it, I would have put both cables inside the conduit, and put a sleeve where the cable goes through the wall.
But hey, that is just me. Am also not sure about the lack of grounding protection against lightning for your modem and my router.
Since the cable into the house is not enclosed, nor is there a drip loop to prevent water entry, I would have done this differently.
Home Depot has these, and you could silicone a conduit elbow to it.

I would have also expected some kind of junction block (with a ground wire) inside the box, like at the pedestal.
See the example below left for a ground wire.
Speaking of pedestals, he did take the time to fix the pedestal, so that the cover would close properly.
None of the previous techs took the time to do that, so I am appreciative of that.

This is however better than some samples I found online:
Lefty

From: Spectrum OP VP [mailto: VP@charter.com]
Sent: Wednesday, May 03, 2023 1:39 PM
To: Lefty Insider <lefty@tcw.org>
Subject: RE: [EXTERNAL] RE: Delivery Confirmation

Lefty,
Gaining some traction on the "hops" / "Speed" concern. May know more by the end of the week. How have your results been recently?
VP

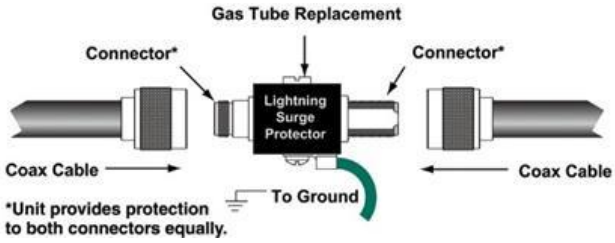
From: Spectrum OP VP [mailto: VP@charter.com]
Sent: Friday, May 05, 2023 5:34 PM
To: Lefty Insider <lefty@tcw.org>
Subject: RE: [EXTERNAL] Speed and cable install
Mr. Insider,
I will get the work at your house QC'd to make sure it is up to standards.
I will send an update on Monday on the speed concern. I received an update from network engineering and need to review before determining where we need to go next.
Have a good weekend.
VP

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Saturday, May 06, 2023 10:25 AM
To: 'Spectrum OP VP' <VPOP@charter.com>
Subject: RE: [EXTERNAL] Speed and cable install
VP,
Looking at this more carefully, the National Electrical Code NEC 820.93(A) requires an outside ground block at the point where the coax enters the building. See attached E828B-NAEN.pdf, also from the cable modem installation manual:

Note: To CATV system installer — This reminder is provided to call the CATV system installer's attention to Section 820.93 of the National electric code, which provides guidelines for proper grounding and, in particular, specifies that the coaxial cable shield must be connected to the grounding system of the building, as close to the point of cable entry as practical.

He could have used one of these:

If he did not want to use a splitter and increase impedance. Or something like this:



Yet further investigations reveals a ground _inside_ the house.

Not sure if this was code 25 years ago when the house was built, but it does not appear to be code now. Of course the tech was never inside the house, so he could not have known about this ground. However at least two other Spectrum techs did look at this previously, and did not comment on it.
Lefty
Can the quality of a DOCSIS connection to a home become impaired by a bad ground wire?

ChatGPT 3.5

Yes, the quality of a DOCSIS (Data Over Cable Service Interface Specification) connection to a home can be impaired by a bad ground wire. A proper ground connection is important for maintaining the integrity and performance of the cable signal.

In a DOCSIS setup, the cable modem connects to the internet service provider (ISP) through a coaxial cable, which carries the data signal. The ground wire in the cable system serves as a safety measure and helps to protect against electrical surges and interference.

If the ground wire is faulty or improperly connected, it can introduce electrical noise and interference into the cable system. This interference can degrade the quality of the DOCSIS connection and result in issues such as reduced signal strength, increased signal noise, or intermittent connectivity problems.

A bad ground connection can lead to a variety of issues, including slower internet speeds, packet loss, increased latency, and a generally unstable connection. It can also impact the reliability and performance of services that rely on the DOCSIS connection, such as video streaming, online gaming, or VoIP (Voice over Internet Protocol) telephony.

To ensure optimal performance of a DOCSIS connection, it's important to have a properly grounded coaxial cable system. If you suspect a bad ground wire or are experiencing connectivity issues, it's recommended to contact your internet service provider or a professional technician who can inspect and address any grounding issues in your cable setup.

From: Spectrum OP VP [mailto: VP@charter.com]
Sent: Saturday, May 06, 2023 10:38 AM
To: Lefty Insider <lefty@tcw.org>
Subject: Re: [EXTERNAL] Speed and cable install

We need to have the service bonded. 100% agree. I sent this to the manager yesterday and he will work on rectifying the situation.
VP

From: Spectrum OP VP [mailto: VP@charter.com]
Sent: Monday, May 08, 2023 5:45 PM
To: Lefty Insider <lefty@tcw.org>
Subject: RE: [EXTERNAL] Speed and cable install
Mr. Insider,
I understand one of our techs will confirm that the drop installation meets our requirements.
Regarding the speed concern. The IP engineering team did not find any routing issues. Based on the network and the location of the speed test servers they determined the routing is done efficiently. In addition they reviewed addition data and traffic levels and did not see any capacity / contention issues in the circuits that are utilized between your house and the Internet POP.
I think this leaves us with discussing how we can do additional testing at your premise. We would need to do testing at the back of the modem with equipment that only has relatively basic software installed to see if we get more consistent speed test results.
I am open to discussing next steps and certainly would like your thoughts on my suggestion.
Regards,
VP

Now they really want me to have their app, and are getting really familiar with the use of my first name. Can you say data harvesting? To avoid this poorly formatted message you can click the link to view on the web. Btw, it ignores my browser preference and opens in IE.

From: Spectrum [mailto:no-reply@exchange.spectrum.com]
Sent: Monday, May 08, 2023 9:22 AM
To: Lefty@tcw.org
Subject: Lefty, this was meant for you

LEFTY,
GET MORE OUT OF YOUR SPECTRUM SERVICES WITH OUR APP.

Spectrum

MY SPECTRUM APP
Manage your account and more- all in one convenient app
Change your Wi-Fi password, pay your bills and more with the **highest-rated support app** in the U.S. among all national telecommunications providers.

LEARN MORE

Highest-Rated Support App iOS (App Store) and Android (Google Play) average ratings as of Jan 3, 2023. Apps must have at least 150k reviews in combination of both the iOS & Android stores as of Jan 3, 2023.
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From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Tuesday, May 09, 2023 9:58 AM
To: 'Spectrum OP VP' <VPOP@charter.com>
Cc: 'Senior VP' <SVP@charter.com>
Subject: RE: [EXTERNAL] Speed and cable install

VP,
Further testing at my modem will only reveal speed at that specific point in time. We need to look at it at least over a week to ten days, see below.
We have proven on multiple occasions that my router is not only good, but also it far better than anything you as a company provide to your customers.
Do you have a solution for a longer term testing program?
It is just not logically possible that four different computers would give such random results, ALL of which are capable of obtaining the MAX speed.
This has been going on for four long months now, and I am paying for what I am _*not*_ getting.
It IS your network and I am now starting to get angry at your continued stalling, BS, and obfuscation!
I want a resolution to this issue NOW.

New testing from the last week or so:

Laptop Two

Date	Download	Upload	ConnType	ServerName
May/09/2023 8:27	499	40	Ethernet	Eau Claire WI
May/08/2023 8:49	498	40	Ethernet	Eau Claire WI
May/08/2023 8:34	377	40	Ethernet	Eau Claire WI
May/07/2023 9:42	412	38	Ethernet	Eau Claire WI
May/06/2023 11:15	950	40	Ethernet	Eau Claire WI
May/06/2023 10:26	544	40	Ethernet	Eau Claire WI
May/05/2023 8:30	344	40	Ethernet	Eau Claire WI
May/03/2023 14:15	218	40	Ethernet	Eau Claire WI

Laptop One

Date	Download	Upload	ConnType	ServerName
May/09/2023 8:39	713	40	Ethernet	Eau Claire WI
May/08/2023 8:40	752	40	Ethernet	Eau Claire WI
May/07/2023 9:32	735	39	Ethernet	Eau Claire WI
May/06/2023 15:18	879	40	Ethernet	Eau Claire WI
May/05/2023 8:33	703	40	Ethernet	Eau Claire WI
May/04/2023 14:27	626	39	Ethernet	Eau Claire WI
May/03/2023 14:15	616	39	Ethernet	Eau Claire WI

Desktop

Date	Download	Upload	ConnType	ServerName
May/09/2023 8:49	398	40	Ethernet	Eau Claire WI
May/08/2023 8:28	912	40	Ethernet	Eau Claire WI
May/07/2023 9:32	944	40	Ethernet	Eau Claire WI
May/06/2023 15:27	944	40	Ethernet	Eau Claire WI
May/06/2023 11:50	574	40	Ethernet	Eau Claire WI
May/05/2023 10:05	403	40	Ethernet	Eau Claire WI
May/04/2023 16:06	401	40	Ethernet	Eau Claire WI
May/04/2023 14:26	604	37	Ethernet	Eau Claire WI

NUC

Date	Download	Upload	ConnType	ServerName
May/09/2023 8:58	914	39	Ethernet	Eau Claire WI
May/08/2023 15:59	820	37	Ethernet	Eau Claire WI
May/07/2023 9:29	825	40	Ethernet	Eau Claire WI
May/06/2023 12:31	922	40	Ethernet	Eau Claire WI
May/05/2023 8:37	857	39	Ethernet	Eau Claire WI
May/04/2023 16:11	789	38	Ethernet	Eau Claire WI

Some additional questions remain:
As I have shown, my testing to Eau Claire does not really go to Eau Claire based on the IP address. Why am I testing to Denver, and why is it so erratic?
What about being trapped in a Catch 22 on pricing? How can we lower my price?
Btw, all of this info is, and has also been going to the FCC, FTC, and the WI DATCP.
More about the drop installation later,
Lefty

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Tuesday, May 09, 2023 11:56 AM
To: consumercomplaints@fcc.gov
Subject: RE: [FCC Consumer Inquires and Complaints] Re: Spectrum Internet

FCC,
The Spectrum OP VP is still blowing me off on the speed issue. See his response below, and mine following that.
Lefty

From: FCC [mailto:consumercomplaints@fcc.gov]
Sent: Friday, April 28, 2023 7:46 AM
To: Lefty Insider <lefty@tcw.org>
Subject: [FCC Consumer Inquires and Complaints] Re: Spectrum Internet

##- Please type your reply above this line -##
This ticket (#6123084) has been updated.
Hi Lefty,
Thank you again for your submission to the FCC. The FCC's role in this process is to facilitate a conversation between you and your provider. We received a response from your provider to your Ticket No. 6123084.
Here's what happens next:
- Your provider is required to send you a written copy of its response. Keep in mind, If the carrier sends the response by postal mail, it could take up to 10 days for you to receive the response.
- Please review your provider's response. If the issues you raised in your ticket remain unresolved, you can reply directly to this email with a short description of the problem.
- Keep in mind that billing adjustments or other actions by your provider could take time to implement.
- If we do not hear from you within 30 days, your ticket will be closed.
- If you have new issues with your provider, you can file an additional complaint by going to: consumercomplaints@fcc.gov

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Wednesday, May 10, 2023 1:24 PM
To: 'Spectrum OP VP' <VPOP@charter.com>; 'Senior VP' <SVP@charter.com>
Cc: ExecVP@charter.com; COO@charter.com; CTO@charter.com; ; ExecVP-NetOps@charter.com
Subject: RE: [EXTERNAL] Speed and cable install
VP,
Diving deeper into this now:
Went over to the neighbor, the houses built about the same time.

Note, both wires are in the conduit and then one comes out to go into the house. Also note the green ground wire, and the drip loop.

Moving on now to current new installations:
This is a new install, from a couple of years ago, in a newer part of the subdivision where I live.

Note, drip loop, clamp on conduit, no outside ground, lack of weed-whacker protection at the bottom of the conduit. Box mounted with four screws in the correct locations, rather than the two screws on mine in alternate locations. Also the sloppy cut on the top of the conduit. Shows me a lack of pride in the work ethic of this workman.

Seems that to my surprise there are no _*real*_ actualized installation standards at Charter/Spectrum.
Lefty

The Spectrum OP VP called today, but did not really have much to say. The call was perhaps due to me copying my previous two messages to the C-suite, and the whole concept of fecal gravity.

He said he network people pronounced everything with my connection to be OK, but they were still checking on some things.

I asked him about long term testing and he indicated that he was working with engineering on some kind of Raspberry-Pi type device to do that.

I asked him about the sloppy install work examples, he said that they had standard best practices, and he agreed apparently that their training did not take.

He also told me that based on the overlay maps he was looking at, the incoming fiber switches to coax at the entrance to the subdivision about two blocks from my house. This node box with a fiber _in_ port however does not have a fiber _out_ port. Only a coax out.

Fiber to coax node

I asked him about the Catch-22 marketing pricing scheme that I am caught in, and he said that he had someone in billing working on that, but wanted to resolve the speed issues first.

We joked that marketing people are created by taking an engineer and removing all integrity and accountability.

So by now all of this four month ordeal was bring me down and in chatting with our old friend ChatGPT, I decided to make a request:

"How about unrequited love song to Spectrum Internet", I asked?

Verse 1:
Oh Spectrum Internet, you're the one I adore
But it seems that you don't feel the same way anymore
I sit here staring at my screen, waiting for you to respond
But my connection is slow, my heart feels beyond

Chorus:
Spectrum Internet, why can't you see
The love I have for you is real and true, can't you feel it too?
But my messages go unreturned, my calls unanswered
Leaves me with a heart that's broken and shattered
Verse 2:
I remember the days when you were always there
Connection so strong, we were the perfect pair
But now it seems you've moved on, found someone new
Leaves me here, lost and blue
Chorus:
Spectrum Internet, why can't you see
The love I have for you is real and true, can't you feel it too?
But my messages go unreturned, my calls unanswered
Leaves me with a heart that's broken and shattered
Bridge:
I'll keep trying, hoping you'll come back to me
But it seems that it's not meant to be
Maybe one day you'll realize what you've lost
Until then, I'll be here, at what cost
Chorus:
Spectrum Internet, why can't you see
The love I have for you is real and true, can't you feel it too?
But my messages go unreturned, my calls unanswered
Leaves me with a heart that's broken and shattered
Outro:
Oh Spectrum Internet, my love for you remains
Even though my heart is in pain
Maybe one day, you'll come back to me
Until then, I'll be here, loving you silently.

So the tech came out today to resolve my concerns about the installation. I had him install a grommet in the wall, and fix the drip loop. He could not put the house feed cable into conduit since he did not have any conduit elbows and where the cable was would otherwise require putting a new hole in the wall. He explained about the inside ground being OK, but I am not totally buying that and I believe that code requires an outside ground, but perhaps only for new installations. They are concerned about protecting their modems, but I believe that the outside ground is to prevent the house from burning down from a lightning strike.

Regarding the three different installations on three different houses, he explained that there was Old Charter, New Charter, Time Warner Cable installations plus a number of contractors doing installations so that it was unrealistic to expect all the installations to be the same, or perhaps meet any standard.

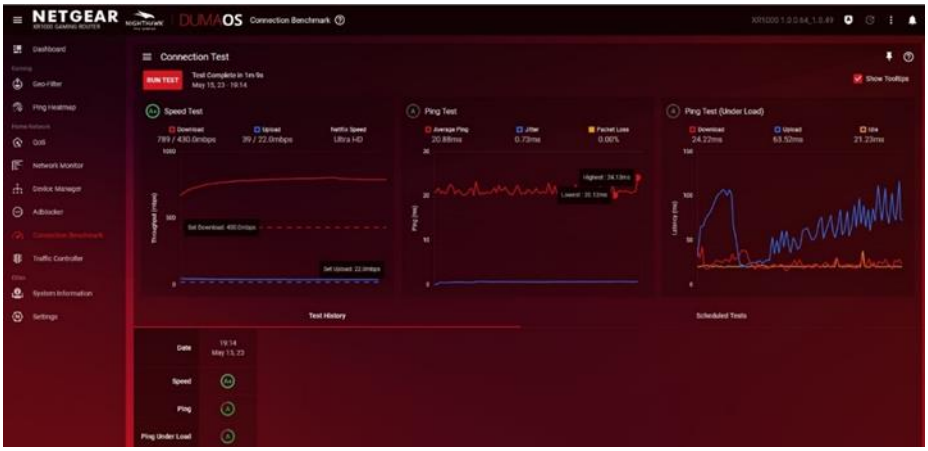
I guess the concept of standard best practice does not apply to the cable Internet business.

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Tuesday, May 16, 2023 5:44 AM
To: 'Spectrum OP VP' <VPOP@charter.com>
Subject: Router speed test
VP,
I do not know how they could have fixed this speed test without a firmware upgrade, but here it is below.
I am running it scheduled one per day regardless.
I did see this:

> ***Note: Due to the anti-buffer bloat features included in DumaOS, your Nighthawk Pro Gaming router might not deliver top scores on some Internet speed test websites even when it is functioning optimally.***

From the Netgear forum:

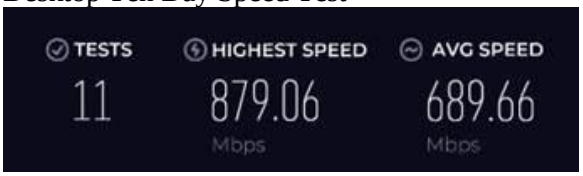
plemans https://community.netgear.com
Guru
2021-06-26 08:07 AM
The problem is that when the router chooses a server to test the speeds, it doesn't always pick the best one. Which is why we rarely recommend the built in test server at those 500mbps+ plans.



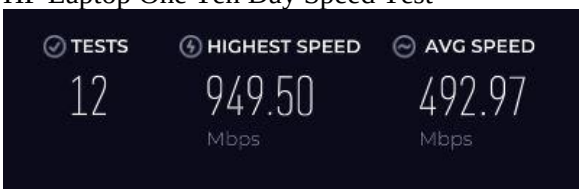
Podcast error message below. Lefty

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Tuesday, May 16, 2023 6:01 AM
To: 'Spectrum OP VP' <VPOP@charter.com>
Subject: Ten day speed test average 663 Mbps

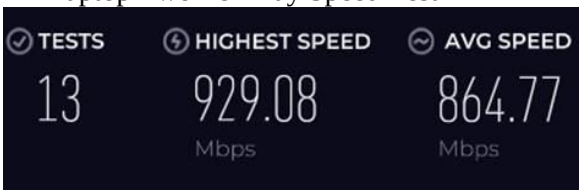
Desktop Ten Day Speed Test



HP Laptop One Ten Day Speed Test



HP Laptop Two Ten Day Speed Test

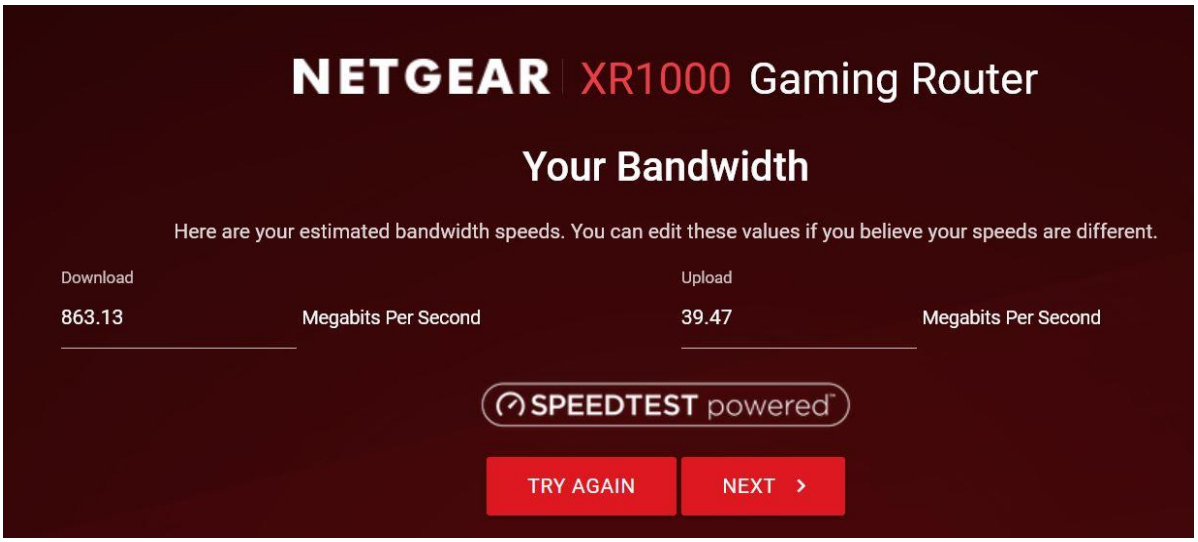


Intel NUC Ten Day Speed Test
Lefty

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Tuesday, May 16, 2023 8:54 AM
To: 'Spectrum OP VP' <VPOP@charter.com>
Subject: Router speed test-part two

VP,
So in scheduling the router speed tests over ten days, I ended up with an error message, so I did a factory reset on the modem. First time since I upgraded to your 1Gbps service.
The bandwidth estimate came up during setup and I edited it to 1000/40 and then ran the test with the results you see in these attachments.

The speed grade went from an "A" pre reset (500Mbps est. setting) to a "B" post reset. (1000 Mbps est. setting)
Lefty

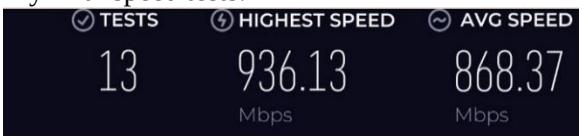


And then I got this:
From: FCC [mailto:consumercomplaints@fcc.gov]
Sent: Tuesday, May 16, 2023 5:00 PM
To: Lefty Insider <lefty@tcw.org>
Subject: [FCC Consumer Inquires and Complaints] Re: Spectrum Internet

##- Please type your reply above this line -##
This ticket (#6123084) has been updated.
Hi Lefty,
Thank you again for your submission to the FCC. The FCC's role in this process is to facilitate a conversation between you and your provider. We received a response from your provider to your Ticket No. 6123084.
Here's what happens next:
- Your provider is required to send you a written copy of its response. Keep in mind, If the carrier sends the response by postal mail, it could take up to 10 days for you to receive the response.

- Please review your provider's response. If the issues you raised in your ticket remain unresolved, you can reply directly to this email with a short description of the problem.
- Keep in mind that billing adjustments or other actions by your provider could take time to implement.
- If we do not hear from you within 30 days, your ticket will be closed.
- If you have new issues with your provider, you can file an additional complaint by going to: consumercomplaints@fcc.gov

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Friday, May 19, 2023 9:03 AM
To: 'Spectrum OP VP' <VPOP@charter.com>
Subject: Speed tests and an interesting note
VP,
My final speed tests.



Surface tablet ten day speed test

Samsung tablet ten day speed test

Note: So I am using a Surface 4 for speed testing, with an USB to Ethernet adapter, and getting about 900Mbps on the Ookla speed test program. Since this program works poorly with a touch screen I got frustrated and put in an older USB hub so I could use a mouse and the Ethernet adaptor at the same time in the sole USB port of the Surface. My speed test then dropped to about 300Mbps doing this. So I took it out and retested and got about 900Mbps. I guess there is a significant difference in the throughput of a USB 1 hub versus USB 3 port.

Lefty

From: Spectrum OP VP [mailto: VP@charter.com]
Sent: Friday, May 19, 2023 9:06 AM
To: Lefty Insider <lefty@tcw.org>
Subject: RE: [EXTERNAL] Speed tests and an interesting note
Mr. Insider,
Interesting how consistent they are.
The engineering team has been running tests all week and I anticipate results over the weekend. It will be curious to see how they look.
VP

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Monday, May 22, 2023 1:42 PM
To: 'Spectrum OP VP' <VP@charter.com>
Subject: RE: [EXTERNAL] Speed tests and an interesting note
VP,
It appears as though the upload is flakey today as well.
Lefty

From: Spectrum OP VP [mailto: VP@charter.com]
Sent: Monday, May 22, 2023 12:40 PM
To: Lefty Insider <lefty@tcw.org>
Subject: RE: [EXTERNAL] Speed tests and an interesting note

Lefty,
I hope you had a good weekend. Attached is the speed testing we completed last week on your modem. We did not receive a test below the 1G speed at any time during the week.
I am not sure how you would like to proceed. I think we are at the point where we can either test out of the back of the modem to see what we achieve and then determine what to do next after we gather that data.
Thoughts?
VP

Headend Speed Test											Data Throughput			
											Download		Upload	
Date	Time	HUB	CMTS	MAC	Test Equipment	Results	Active engines	Connection time ms	Total data transfer time ms	Ping response ms	Max Mbps	Avg Mbps	Max Mbps	Avg Mbps
5/16/2023	4:15PM	Two Rivers WI	CTS01TWRVWI	50	VeEx CX380s-D3.1	Passed	4	1004	61501	61.355	1070.855	1042.031	40.15	36.642
5/16/2023	5:10PM	Two Rivers WI	CTS01TWRVWI	50	VeEx CX380s-D3.1	Passed	4	1032	61440	61.373	1068.919	1034.787	45.041	36.531
5/17/2023	8:03AM	Two Rivers WI	CTS01TWRVWI	50	VeEx CX380s-D3.1	Passed	4	1040	61512	61.273	1070.639	1036.214	45.041	36.664
5/17/2023	5:01PM	Two Rivers WI	CTS01TWRVWI	50	VeEx CX380s-D3.1	Passed	4	1048	61554	61.048	1063.565	1027.533	45.041	35.283
5/18/2023	8:01 AM	Two Rivers WI	CTS01TWRVWI	50	VeEx CX380s-D3.1	Passed	4	1076	61430	52.445	1068.269	1044.386	45.041	37.372
5/18/2023	5:03 PM	Two Rivers WI	CTS01TWRVWI	50	VeEx CX380s-D3.1	Passed	4	1072	61130	52.287	1068.276	1033.191	45.041	34.848
5/19/2023	8:07 AM	Two Rivers WI	CTS01TWRVWI	50	VeEx CX380s-D3.1	Passed	4	1044	61149	64.892	1067.94	1007.07	45.041	39.415
5/19/2023	5:00PM	Two Rivers WI	CTS01TWRVWI	50	VeEx CX380s-D3.1	Passed	4	1060	60905	66.246	1072.019	1042.968	45.041	38.66

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Monday, May 22, 2023 3:01 PM
To: 'Spectrum OP VP' <VPOP@charter.com>
Subject: RE: [EXTERNAL] Headend Speed tests
Hi VP,
First of all, thanks for having these tests run.
My critique? Reaction to your test results?

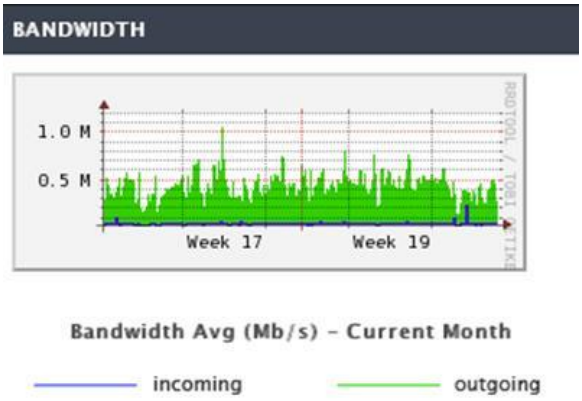
- Your tests cover three days (72 hours) Instead of the seven to ten days I think are necessary and that many dozens of my own tests reflect.
- Your test times correlate to when most people are at work, and not heavily using this node
- Your test connection time is roughly 0.016 minutes. My connection times are two hours plus for streaming content and podcasts.
- Your data transfer time is roughly one minute (how about downloading a 4 GB file repeatedly? https://tcw.org/downloadtestfile.iso You can put this file on one of your test servers.
- Your CX380s-D3.1 test equipment is a _*meter*_ and not a computer. People do not stream Netflix or watch podcasts on meters.

One if this meters features is *"the ability to lock user interface to prevent unwanted human interference during long-term testing"* So I will assume that longer term testing can easily be done and automated.
Another meter feature is to *"Maintain instrument software, manage test setups and channel tables, process measurement results and generate customer test reports using included ReVeal™ PC software"* Is it possible with this software to see a flow chart graph of my traffic?

- So the Two Rivers CTS_01 is my headend WAN router, packet converter, IP assigner, and perhaps also does bridging, filtering and traffic shaping? So were these tests done by a tech plugging into this CMTS at your Two Rivers hub? And if so, what are you actually testing here and why are the ping times so high (double)?

I do not need to understand your network system architecture, or any proprietary info that lies therein, but I do want to understand what you are testing to/from. Is this an active connection port tap on my network line?
PS. The last email I sent shows a deprecation of upload speed on my connection as well.
Thanks for your patience,
Lefty

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Tuesday, May 23, 2023 10:21 AM
To: 'Spectrum OP VP' <VPOP@charter.com>
Subject: RE: [EXTERNAL] Headend Speed tests response part two and a joke
VP,
Something like these perhaps to show data usage:



But more importantly something like graph this to show actual speed over time. Note how bad these results are for me today to a Minneapolis server. At the same time, a speed test to Spectrum Eau Claire shows about 800Mbps.

Meanwhile:

User
Tell me a joke about Spectrum Internet
ChatGPT 3.5
Sure, here's a joke about Spectrum Internet:
Why did the computer go on a diet?
Because it was tired of all the buffering on Spectrum Internet!

From: Spectrum OP VP [mailto: VP@charter.com]
Sent: Tuesday, May 23, 2023 2:23 PM
To: Lefty Insider <lefty@tcw.org>
Subject: RE: [EXTERNAL] Headend Speed tests response part two and a joke

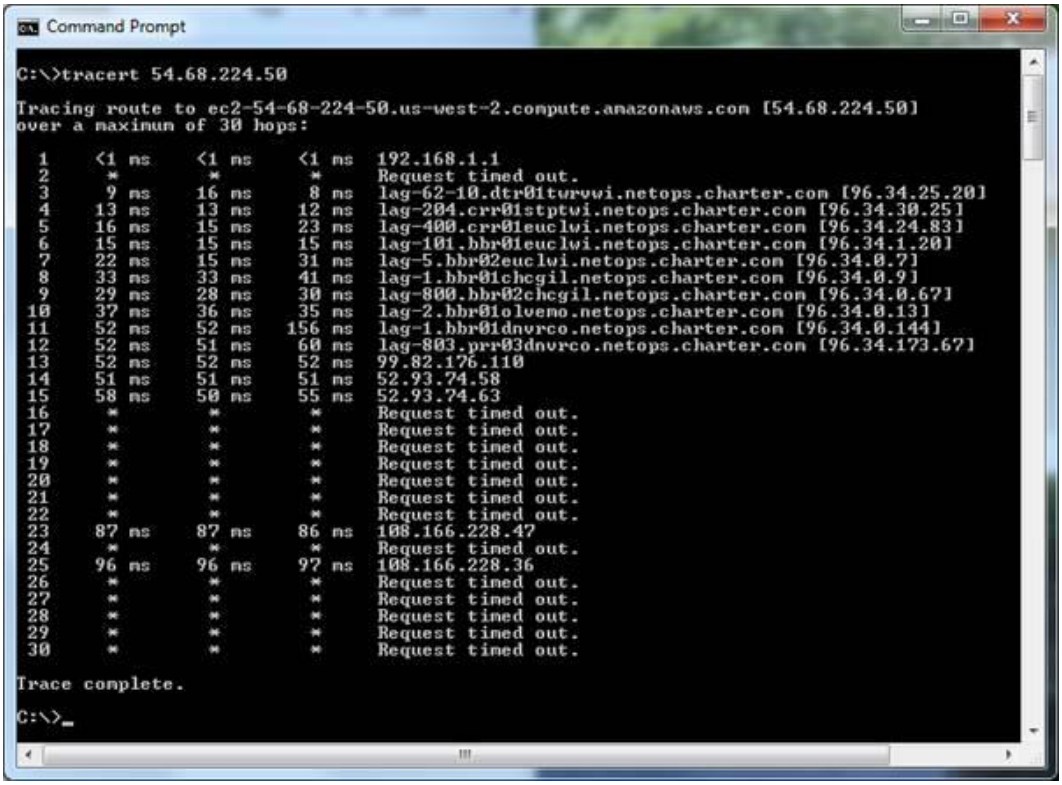
We have this for the entire node. We are below 50% capacity on both the upstream and the downstream. The peak between 5:00 PM and 9:00 PM is 40% utilized. Most other times of the day it is 15 – 20% utilized. Overall capacity should not be impacting the speed tests.

I think we need to consider running tests with a capable laptop connected via Ethernet to the modem. If this test shows an issue with the Spectrum network then we can continue to dig in with the network engineers. With your computers and your router included in the testing process and the fact that we have not been able to duplicate the variability of the tests in any of our testing / network monitoring points me to having to do a test at the demarc and proceeding from there. I am open to suggestions on how you prefer to run the tests.

Let me know how you would like to proceed.
VP

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Wednesday, May 24, 2023 7:48 AM
To: 'Spectrum OP VP' <VPOP@charter.com>
Subject: RE: [EXTERNAL] Headend Speed tests response part two and a joke

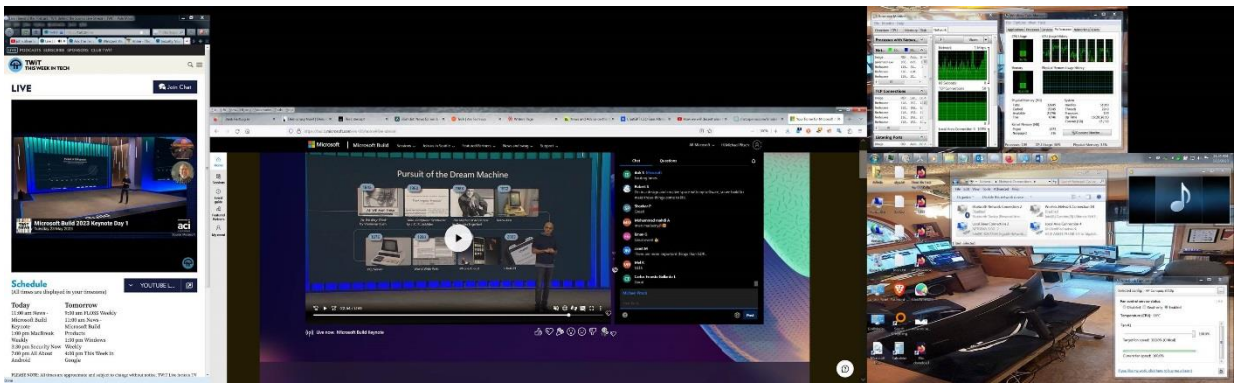
Ok, so if it is not node capacity, then it must be related to SPECTRUMNET/Internet routing, or peering/transit agreements.
Here is an example, stepping away from testing at Spectrum at Eau Claire, and following up on my previous sub 100Mbps speed test:
As you may recall this was a speed test to a Minneapolis server, where you said that Spectrum has an Internet connection presence.
dnschecker.org puts Speedof.me as 54.68.224.50 and 52.34.69.152
IP2location puts this IP address as Amazon in Oregon
The 30 hops end in a time out. Last IP displayed before final timeouts is T-Mobile in Bellevue Washington.



"I am open to suggestions on how you prefer to run the tests."

I would be open to suggestions from your engineers as to how to test from my modem on my end without disabling the use of my connection.
Lefty

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Wednesday, May 24, 2023 8:09 AM
To: 'Spectrum OP VP' <VPOP@charter.com>
Subject: Watching Microsoft Build 2023 today with multiple streams, with multiple tabs open, on multiple browsers, on multiple screens without any buffering on Laptop One
A screen(s) shot below.



Watching Microsoft Build today with multiple streams, with multiple tabs open, on multiple browsers, on multiple screens without any buffering on Laptop One. However, this only uses 20-30Mbps.

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Thursday, May 25, 2023 7:44 AM
To: 'Spectrum OP VP' <VPOP@charter.com>
Subject: RE: [EXTERNAL] Headend Speed tests response part two and a joke

I thought of this, but it will not work.

Attention: A single Ethernet splitter does not support two devices to access the Internet at the same time. Only one device can be connected to the Internet at a time.

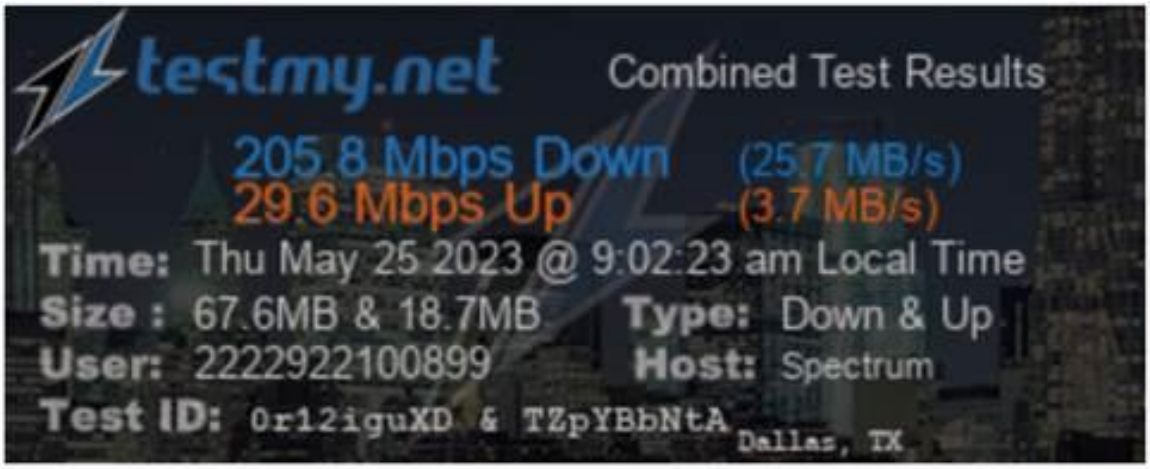
From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Thursday, May 25, 2023 9:12 AM
To: 'Spectrum OP VP' <VPOP@charter.com>
Subject: Reality tests, part one

https://search.brave.com/search?q=What+is+the+very+best+most+accurate+Internet+speed+test+site%3F
According to ZDNet and Digital Trends, Ookla's Speedtest is the best Internet speed test site for virtual classes, entertainment, and remote work.

https://testmy.net/ipb/topic/28902-why-do-my-results-differ-from-speedtestnet-ookla-speed-tests/

The Fiber Speedtest is also highly accurate and provides information on upload speed, download, and ping data. https://fiber.google.com/speedtest

Testmy.net is another option that runs entirely on HTML5 and PHP. What that means is that it doesn't require third-party software like Java or Flash to run your test, which can make for more accurate results, making it more accurate and useful for comparing performance between different browsers.



From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Thursday, May 25, 2023 9:13 AM
To: 'Spectrum OP VP' <VPOP@charter.com>
Subject: Reality tests, part two

LE

What is the very best most accurate Internet speed test site?

ChatGPT 3.5

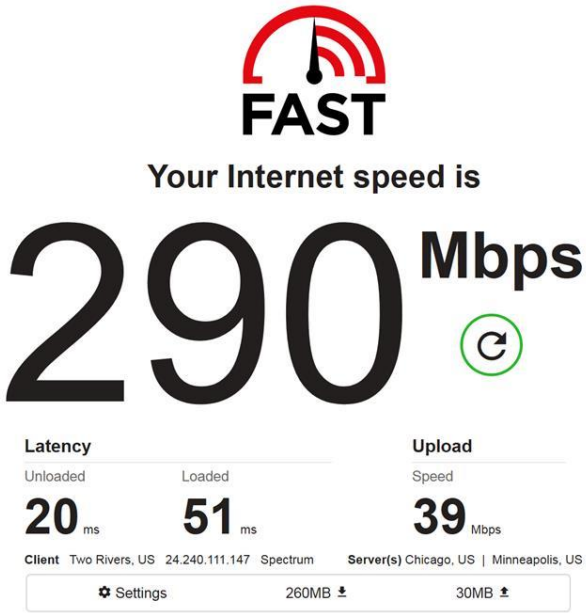
There are several reliable and widely-used Internet speed test sites that can provide accurate results. Here are a few of the most popular options:

Ookla Speedtest (https://www.speedtest.net): Ookla is one of the most well-known and widely used speed test providers. They offer a web-based test that measures your download and upload speeds, as well as latency (ping).

Fast.com (https://fast.com): Fast.com is a simple and straightforward speed test tool provided by Netflix. It focuses primarily on measuring your download speed and provides instant results without any additional information.

Google Speed Test (https://www.google.com/search?q=speed+test): Google provides its own built-in speed test feature. You can simply search for "speed test" on Google, and it will display a test directly in the search results. This test measures your download, upload, and latency speeds.

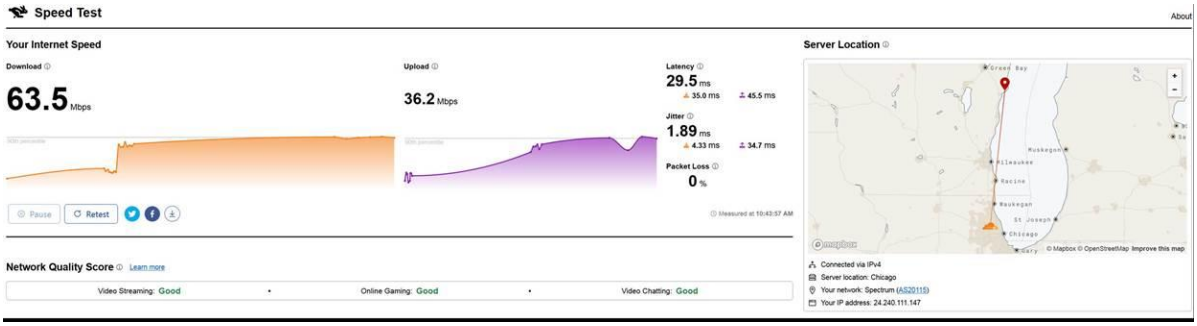
These websites are widely trusted and offer accurate speed test results. However, keep in mind that various factors can influence your Internet speed, such as network congestion, device limitations, and the distance to the server you're testing against. It's often a good idea to perform multiple tests on different sites and at different times to get a more comprehensive picture of your Internet speed.



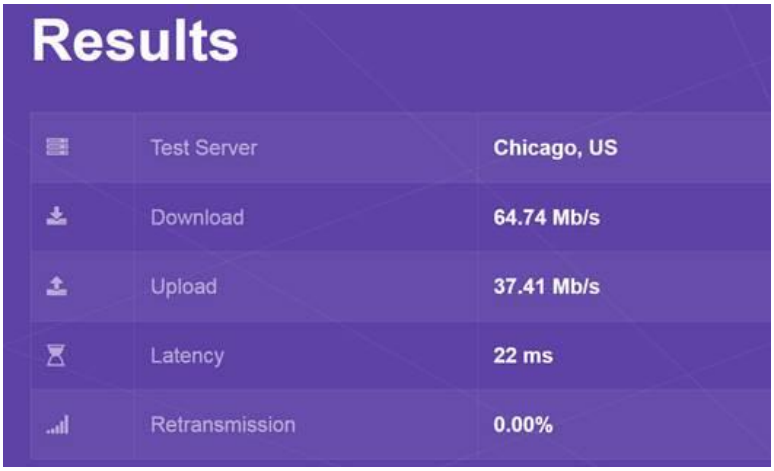
From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Thursday, May 25, 2023 11:05 AM
To: 'Spectrum OP VP' <VPOP@charter.com>
Subject: Reality tests, part three

Google.com
https://www.google.com/search?q=What+is+the+very+best+most+accurate+Internet+speed+test+site%

Tom's Guide
https://www.tomsguide.com › News › Apps
Search for: What is the No 1 Internet speed test app?
How do I check my Internet speed accurately?
The Internet offers several websites that provide free Wi-Fi speed tests. We recommend CloudFlare, https://speed.cloudflare.com/ and
M-Lab Internet Speed Test https://speed.measurementlab.net/#/



MLAB



From: Spectrum OP VP [mailto: VP@charter.com]
Sent: Thursday, May 25, 2023 10:46 AM
To: Lefty Insider <lefty@tcw.org>
Subject: RE: [EXTERNAL] Headend Speed tests response part two and a joke
I think we would need to provide a router / switch that could provide another port of the back of the modem. How many of the Nighthawk Ethernet ports are you using?

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Thursday, May 25, 2023 11:10 AM
To: 'Spectrum OP VP' <VPOP@charter.com>
Subject: RE: [EXTERNAL] Headend Speed tests response part two and a joke
Am actively using three of five.
Based on my newest speed tests however, (today) I think the issues are deeper inside of the Spectrum network.

From: Spectrum OP VP [mailto: VP@charter.com]
Sent: Thursday, May 25, 2023 10:48 AM
To: Lefty Insider <lefty@tcw.org>
Subject: RE: [EXTERNAL] Headend Speed tests response part two and a joke

Here is the network engineering perspective on these tests….
That looks to be a speed test server provided by https://speedof.me/ & not CHTR owned. I tested at 16 Mbps down & 26 Mbps up out of my office location from this provider. We do not have visibility into this non-CHTR network to see what's going on there & why results are less than the desired.
The particular IP range is announced by Amazon to CHTR out of Seattle WA, San Jose CA, Los Angeles CA & Denver CO. They do not announce it to CHTR in Minneapolis albeit both Amazon & CHTR having a presence there. Traffic for this one customer is using Denver as the preferred path.
As for the timeouts, these are likely due to ICMP packet filtering; not all providers honor these after all. Timeouts on traceroutes are not an indicator of issues within the network.
Also regarding the statement, "IP2location puts this IP address as Amazon in Oregon" – I would be extremely careful when relying on geolocation data for IPs & websites claiming that they have the most "accurate data." In my case this website is telling me that my IP is out of Charlotte, NC when it's in fact routing out of Denver, CO.
VP

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Thursday, May 25, 2023 12:03 PM
To: 'Spectrum OP VP' <VPOP@charter.com>
Subject: RE: [EXTERNAL] Headend Speed tests response part two and a joke
VP,
Ok, I will buy what most of what they are saying.
Not sure why a test server not being Charter owned is relevant. The Internet is not Charter owned either, nor does the _Internet_ service you are selling constrained to Charter owned networks.
It is not like I am testing to Australia or Japan.
"Timeouts on traceroutes are not an indicator of issues within the network."
I never even implied that they were.
I do understand the vagarities of IP geolocation.
There are however five additional _*very*_ substandard speed tests that I have sent you today.
None of which are Charter owned by the way, but are Chicago and Minneapolis based for the most part.

I do believe that my _*Spectrum* ***Internet***_ connection should extend beyond your _ SPECTRUMNET_ to Eau Claire WI, and I do not have consistency even there across six different computers over the past three years.
Regarding your last email, how about a modem with a second Ethernet port:
Arris says that you support it. I suspect that I would need some help setting it up to your network.
https://www.surfboard.com/products/cable-modems/sb8200/ See below.
I also suspect that to support this would require some configuration work on your CMTS server at your TR hub, to support a second MAC address and perhaps a second IP address to use for this testing.
PS. The error messages I am getting in Pale Moon twit.tv podcasts and freezes in Brave when streaming on Prime could be caused by dropouts from my existing modem. Unless of course this is caused by you pushing out new firmware to the modem, frequently.

SB8200

SURFboard® DOCSIS® 3.1 Cable Modem

3.5 (48) Write a review

As more cable providers upgrade their services to offer DOCSIS 3.1 speeds, your network will be ready with the SURFboard SB8200. Increase your network capability and get faster streaming and downloading throughout your home.

COX Charter Spectrum xfinity

Lefty

I wonder what does an AI have to say about this idea?

LE

Is the Arris SB8200 a good modem?

ChatGPT 3.5

The Arris SB8200 is generally considered a high-performance modem and has received positive reviews from many users. It is a DOCSIS 3.1 modem, which means it is compatible with high-speed Internet plans and can support faster download and upload speeds compared to older modem models.

Some key features of the Arris SB8200 include:

Dual Ethernet ports: The modem has two Gigabit Ethernet ports, allowing you to connect multiple devices directly to the modem without requiring an additional router or switch.

Compatibility: The SB8200 is compatible with most major cable Internet service providers in the United States, making it a versatile choice for a wide range of users.

High-speed capabilities: With support for DOCSIS 3.1 technology, the modem can handle higher speeds, including Gigabit and multi-Gigabit Internet plans.

Future-proofing: DOCSIS 3.1 technology is designed to be backward compatible with older DOCSIS versions, so the SB8200 can also work with older Internet plans. It offers a level of future-proofing as ISPs continue to upgrade their networks.

However, it's worth noting that the performance and reliability of a modem can also depend on other factors such as ***the quality and stability of your Internet service provider,*** the condition of your coaxial cable wiring, and the overall network infrastructure in your area.

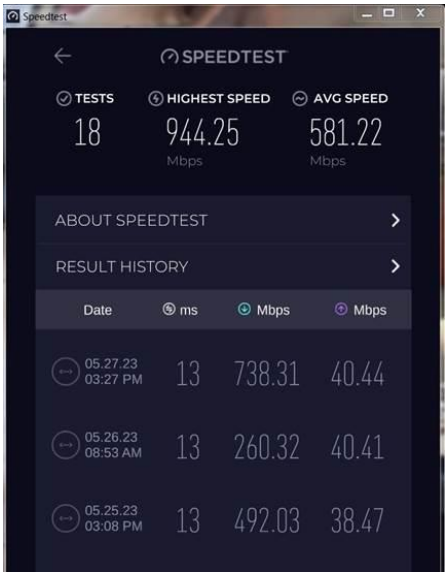
Before purchasing the Arris SB8200 or any other modem, it is recommended to check with your ISP to ensure compatibility and verify if they have any specific recommendations or requirements. Additionally, it can be helpful to read customer reviews and consult with technical experts or online communities to gather more insights about the modem's performance in real-world scenarios.

From: Spectrum OP VP [mailto: VP@charter.com]
Sent: Friday, May 26, 2023 8:41 AM
To: Lefty Insider <lefty@tcw.org>
Subject: RE: [EXTERNAL] Headend Speed tests response part two and a joke
Hi,
One other item. Do you have QOS enabled on the Nighthawk? This has been reported that it can cause routing issues. Not sure if this has been tested but I thought it was one more thing to look at.
VP

From: Lefty [mailto: lefty@tcw.org]
Sent: Friday, May 26, 2023 4:34 PM
To: 'Spectrum OP VP' <VPOP@charter.com>
Subject: RE: [EXTERNAL] Headend Speed tests response part two and a joke
VP,
No, I know better than to do that, and I have no reason to use that or the VPN feature.
The Nighthawk link aggregation feature however…
As you may recall, I recently did a factory reset on the router and it is using those default settings.

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Sunday, May 28, 2023 8:10 AM
To: 'Spectrum OP VP' <VPOP@charter.com>
Subject: And so it goes

Testing to Eau Claire, erratic behavior continues with no reboots in between tests.



From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Monday, May 29, 2023 10:02 AM
To: 'Spectrum OP VP' <VPOP@charter.com>; 'Senior VP' <SVP@charter.com>
Cc: ExecVP@charter.com; COO@charter.com; CTO@charter.com; ; ExecVP-NetOps@charter.com
Subject: A note on speed testing my Spectrum Internet connection, and another song

Hello again VP et al,
A note or executive summary on my seemingly endless speed testing.
For the past three years I have been frustrated by the poor performance/high price of my Internet connection from your company. This issue was initially resolved three years ago by Spectrum *mentally* fixing it with a pricing discount, rather than a *physical* network fix. However, I am now paying an ever escalating price for a randomly inadequate service and am seemingly caught in a marketing Catch22 pricing conundrum.

In the early days of my testing, it was about bandwidth errors received, and then what I viewed as false/misleading advertising, but has now, since the upgrade to 1Gbps, evolved to be more about achieving your actual advertised speeds. Based on my testing frustrations, and an adequate technical background, I have tried my very best to eliminate testing variables.

1. I have stopped browser testing, due to the variations of Firefox, Pale Moon, Brave, and their various extensions. Chrome and Edge are unacceptable choices due to their extensive tracking and data harvesting proclivities. See https://coveryourtracks.eff.org/
2. I am exclusively using the Ookla Speedtest software application program. https://www.speedtest.net/apps/windows

3. I have stopped testing to random available test sites (due to my inability to determine the actual bandwidth provided to their test servers) at various geographical locations, in favor of your Eau Claire SPECTRUMNET test site @200 miles distance.
4. I have eliminated any non-Windows firewalls (this did make a difference in total speed, but not variability)
5. I have eliminated any non-Windows AV (no difference detected)
6. I have eliminated host files and refined DNS on my machines (although it is unclear if this made a difference)
7. I have eliminated any wireless network variations by exclusively using 1Gbps hard wired Ethernet connections (made an unknown difference)
8. I am using 100Gbps Cat 7 wiring at the router, (to eliminate any potential RF interference) and 10Gbps Cat6a and a Netgear managed gigabit switch to the clients (50 feet plus patch cables)
9. I replaced what I viewed as a fully functional Netgear R7000 router with a newer Netgear XR1000 gaming router
10. I am not using any QoS or VPN services in this router, as I do not need them, but I look forward to needing the router's Link Aggregation feature.

As you well know, my overall speed results to your Eau Clair test site have gotten better and are now faster than three years ago, so better but they are not at all consistent.
Once I move off of your SPECTRUMNET to get to the real Internet, (Chicago 160 miles/Minneapolis 200 miles) my results are markedly worse.

As seen in the speed tests I recently sent you, the top speed test sites recommended by Brave Search, ChatGPT, and Google Search, all show test results that are _*very*_ poor. It would stand to reason that _*All*_ of these highly recommended test sites cannot be bad, just because they are not Charter owned, i.e. non-CHTR network as your network engineer put it.
Although this type of testing does reintroduce the browser software into the mix. As you will recall, these seven recommended, best of the best, speed-testing server test results were 206, 273, 290, 64, 65, and 97 Mbps respectively, while your Eau Claire SPECTRUMNET server tested at 879Mbps.

You personally seem now to be focused again and circling back over already well plowed ground to my equipment, like the router which is one of the best that money can buy. **This is the same router that your technicians continuously used to pronounce my connection as being OK**. This I believe is because you basically cannot argue with the results of my ten computers as being a machine related or OS related issue. You certainly cannot expect all of your customers to have such a high quality router to get your advertised speed, or if so it should certainly be a yet another disclaimer in your advertising.

As you can clearly see, I do have skin, and money into this game, and yet I am left with a very expensive and very random Internet connection.
It is now time to install a dual port modem to automate the testing to testmy.net or some site of your choosing, and put an end to this time and resource wasting testing routine, and in my view unwarranted negative speculation regarding my router and my computer fleet. Once you have gained acceptance from this irrefutable data, you can go about actually solving the problem. If it is an electronics issue, upgrade your network equipment. If it is not that, then fix your peering and transit agreements. Just fix it!
By my count I have sent you personally 50 plus email messages and another 10 to spectrumchatsupportengineers@charter.com, not to mention dozens of phone calls over these past _*five*_ months. Enough is now enough!

Your failure to resolve this issue in a timely manner has significantly delayed me in having the time necessary to write the final two stories to complete my fifth novel. While I am in fact retired, I do value my time. But if you are trying to discourage me or wait me out, I have at least five good years left in me. Maybe by that time the FCC, FTC, or DATCP will finally wake up.
Lefty

Now let me take some solace in asking my old friend ChatGPT for a blues tune.

Can you write an unrequited love song to Spectrum Internet, in the style of Sir Arthur C. Clark?
ChatGPT 3.5

(Verse 1) Oh, Spectrum Internet, a love unrequited, In the realm of signals, where our paths collided, Through the boundless expanse of electromagnetic waves, I yearn for your connection that never quite behaves.

(Chorus) Like a satellite adrift, I search the cosmic sea, Hoping for a glimpse of your broadband's decree, But alas, my longing remains unfulfilled, For you, Spectrum Internet, I'm forever stilled.

(Verse 2) In the realm of latency, our bond does falter, As data packets traverse the digital alter, A cosmic dance of electrons lost in space, My heart aches for a signal, a touch of your embrace.

(Chorus) Like a satellite adrift, I search the cosmic sea, Hoping for a glimpse of your broadband's decree, But alas, my longing remains unfulfilled, For you, Spectrum Internet, I'm forever stilled.

(Bridge) In the realm of streaming, I yearn for your grace, But buffering delays, they haunt me in this chase, Through starlit routers, my devotion flows, Yet you, Spectrum Internet, remain unknown.

(Verse 3) With each dropped connection, my heart skips a beat, The modem's flickering lights, a rhythm incomplete, I send my signals, a beacon in the night, But your bandwidth eludes me, slipping out of sight.

(Chorus) Like a satellite adrift, I search the cosmic sea, Hoping for a glimpse of your broadband's decree, But alas, my longing remains unfulfilled, For you, Spectrum Internet, I'm forever stilled.

(Outro) Oh, Spectrum Internet, an unrequited love affair, In this digital world, I find solace and despair, Though our paths may never intertwine, I'll forever yearn for your connection divine.

From: Spectrum OP VP [mailto: VP@charter.com]
Sent: Tuesday, May 30, 2023 9:28 AM
To: Lefty Insider <lefty@tcw.org>
Subject: RE: [EXTERNAL] A note on speed testing my Spectrum Internet connection, and another song
Hi,
I am meeting with the engineering team on Wednesday to get a plan together. We can catch up on Thursday to discuss next steps.
VP

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Tuesday, May 30, 2023 10:05 AM
To: 'Spectrum OP VP' <VPOP@charter.com>
Subject: Speed test video
Meanwhile, there is this…
Lefty

Speed test.mp4 http://www.tcw.org/Speed test.mp4

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Wednesday, May 31, 2023 6:05 PM
To: 'Spectrum OP VP' <VPOP@charter.com>
Subject: OS speed testing my Spectrum Internet connection
VP,
I did these tests to satisfy a curiosity. I do not know what I expected to learn with one-off tests, but I did not learn much.
Lefty

From: Spectrum OP VP [mailto: VP@charter.com]
Sent: Thursday, June 01, 2023 10:50 AM
To: Lefty Insider <lefty@tcw.org>
Subject: RE: [EXTERNAL] OS speed testing my Spectrum Internet connection
Lefty,
I think I have a solution to do more robust testing of your service without significantly interrupting your house network.
We have a device that we have deployed in similar situations that is also used by the FCC referred to a SamKnows device. We can install the device between our modem and the Nighthawk router to measure broadband performance across a variety of dimensions across extended periods of time. Our network team would analyze the data that the device is measuring to help determine the root cause of the various speed test results you are experiencing.
Thoughts about letting us go this route?
VP

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Thursday, June 01, 2023 11:30 AM
To: 'Spectrum OP VP' <VPOP@charter.com>
Subject: RE: [EXTERNAL] OS speed testing my Spectrum Internet connection

VP,
I remember reading about this Whitebox device a few years ago.
I believe that the device technology is kind of dated (limited) now, and can also be done now with software. Although the Whitebox 9 appears to be an upgraded version.

Upgrade existing CPE with Router Agent ***https://www.samknows.com/technology/agents***
"Our Router Agent has all of the same features as our Whitebox but can be downloaded via a firmware upgrade to your customers existing CPE.. All measurement results are securely reported back to the SamKnows infrastructure. One advantage of the Router Agent over the Whitebox is it can test speeds over 1Gbps because it's not limited by the routers 1Gbps network interface ports."

I would not mind either solution as long as I get real-time access to the aggregated data in my own panel data in SamKnows. I would also like to be able to customize the testing schedules, although I believe that it can be configured to only test if the connection is idle. Otherwise, I would like no testing between 8am and 4pm.
I am not sure of the duration of these tests, nor am aware of what the "SamKnows" infrastructure actually is. Is this M-Labs in Chicago?
PS. Why didn't your engineers like the dual port modem idea?
Go ahead with your best judgment,
Lefty

From: Spectrum OP VP [mailto: VP@charter.com]
Sent: Thursday, June 01, 2023 12:42 PM
To: Lefty Insider <lefty@tcw.org>
Subject: RE: [EXTERNAL] OS speed testing my Spectrum Internet connection
Good points,
We could deploy one of our routers with the SamKnows software although this will introduce another piece of equipment to the equation and I am not sure if this would disrupt how you have the Nighthawk configured for you network (SSID, etc.)
If we deploy a box, it will be the latest version and what I have seen a more robust version that what I have been able to find online. I would say these are more of a commercial version but not 100% sure.
I will check on the data access / test result questions with the device.
The engineers concern about the dual Ethernet port option is that we do not have a device configured that way. All the D3.1 modem we have only have one port. I don't believe they wanted to change to a device they were not familiar with not control the firmware on the device.
Let me check on the details and in the meantime, I will have a device shipped to the Tech Mgr. Sup. in anticipation we can work out a plan for an installation next week.
VP

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Thursday, June 01, 2023 1:11 PM
To: 'Spectrum OP VP' <VPOP@charter.com>
Subject: RE: [EXTERNAL] connection speed testing via SamKnows
Importance: High
VP,
What I understand is that the SamKnows software (firmware) is just a download to my _*modem*_ not my router.
You could just ship the Whitebox, no need for a truck roll, or in Tech Mgr. Sup's case a one hour car roll. He always brings a tech with him, so it seems wasteful and unnecessary, i.e. not green.
It is just a man in the middle box I believe. I had thought that this program had already expired. It seems to be alive, so I could actually sign up for this myself. https://www.testmyisp.com/connected-home-kit
PS. Your engineers could use some practice with dual port modems for the >1Gbps connections to come. But I understand their concerns if they have never deployed one before around here.
Lefty

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Thursday, June 01, 2023 2:23 PM
To: 'Spectrum OP VP' <VPOP@charter.com>
Subject: RE: [EXTERNAL] Whitebox speed testing my Spectrum Internet connection
Importance: High
VP,
I checked further into the Whitebox signup program and it appears to be Canada only. So it did perhaps expire in the US a few years ago.
They are however giving away $500 Amazon gift cards to volunteer testers. Hint, hint.

Doing further research, the Whitebox does not plug in between the modem and router, but into the router itself.
So this does not seem to accomplish taking the router out of the equation, except for plugging all your Ethernet connections into the Whitebox.

https://test-my-isp.cdn.prismic.io/test-my-isp/b03312d1-d532-4fc9-a218-a49c6fc4fe43_Guide-TestMyISP2+EN.pdf
Our mission at SamKnows: ***Make the world a better place, one sweet megabit at a time.***
Lefty

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Saturday, June 03, 2023 10:17 AM
To: 'Spectrum OP VP' <VPOP@charter.com>
Subject: Dual port cable modems

VP,

Got your text in response to my voicemail regarding us needing to have a Whitebox testing discussion.
Here are a few things I would like you to chew on before we talk on Monday.

"Spectrum Internet customers are required to use an authorized modem to connect to the Spectrum network." https://www.spectrum.net/support/internet/compliant-modems-charter-network

Approved for Spectrum Internet tiers up to 1G - Arris SB8200v3

I will most likely buy this myself if you do not supply it. See attached and below.
https://www.amazon.com/gp/product/B07DY16W2Z/ref=ox_sc_saved_title_10?smid=ATVPDKIKX0DER&th=1

The advantage of you providing it would be of course that Spectrum would be able to access it for testing, monitoring, and firmware upgrades.

Otherwise Spectrum will be locked out and will feel like I do now, with only secondhand knowledge of my modem data.

I am not sure if I need a second IP address to use this second port, short of using link aggregation which I do not want or need at this point.

I know you do not typically provide more than one IP to residential customers, but this address is also the home of Insider Publishing, LLC my book publishing company.

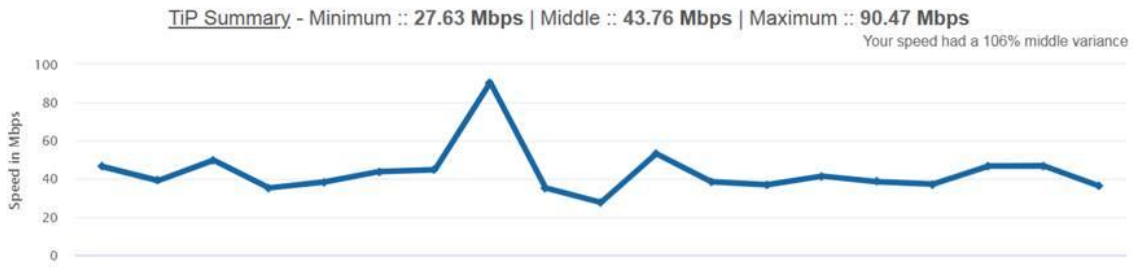
I will also assume that each of these two Arris modem Ethernet ports have a different MAC address. This is because my Intel motherboard with dual NIC's onboard has consecutive MAC addresses.

So your systems will need to allow two MAC connections from the same account. I assume that you do this when someone wants an additional static IP.

What is left to be determined is once I have a dedicated testing port, is what do I connect to for automated long term testing?

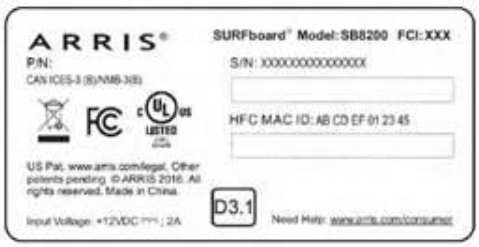
Testmy.net has automated testing, to Dallas, TX, but gives my connection very poor results.

Sub 300Mbps and sometimes as below, sub 100Mbps. (This should not be even possible @ $100 per month)



From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Tuesday, June 06, 2023 2:39 PM
To: 'Spectrum OP VP' <VPOP@charter.com>
Subject: RE: Dual port cable modems revisited
VP,
Ok, so I was wrong about this modem having two MAC addresses, go figure, but was right about needing another IP address to be able to use the second port on another device.

Cable modem label



Per the Arris Community Support Forum

sofiacc24 Button Mashers
Button Mashers
11 replies
1 year ago

When you first activated your SB8200 with you service provider, they subscribed an IP Address to send the signal. The SB8200 is just a cable modem, so the IP Address that they subscribed only works with one Ethernet port. In order for you to use the second Ethernet port, you would then have to subscribe a second IP Address with your service provider however not all the service providers offer a second IP Address for residential service.

I understand that you do not want to provide me this modem, but for me to be able to use it for testing, I would need you however to provide another IP address for the second port. This would isolate the router take it out of the equation for speed testing. This is the only circumstance that I would consider buying this modem myself, since I would be giving up a modem with a single 2.5 Gbps port for one with dual 1Gbps ports, essentially just to do your testing for you. For free.
Lefty

From: Spectrum OP VP [mailto: VP@charter.com]
Sent: Wednesday, June 07, 2023 1:24 PM
To: Lefty Insider <lefty@tcw.org>
Subject: RE: [EXTERNAL] RE: Dual port cable modems revisited
Mr. Insider,
I believe there is not an issue issuing two IPs to a device if that is how it is configured but I need to verify. I assume the network group I am working with can assist.
QQ - Do you know if these Ethernet ports on SB8200 are 2.5 GB/s or are they 1.0 GB/S? I believe they are 2.5 GB/S. Same question for the Ethernet ports on your Nighthawk router. I assume 1 GB/S but not sure which version of the router you have.
VP

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Wednesday, June 07, 2023 1:43 PM
To: 'Spectrum OP VP' <VPOP@charter.com>
Subject: RE: [EXTERNAL] RE: Dual port cable modems revisited
VP,
The SB8200 has two independent 1Gbps ports, unless link aggregated, in which case they become one. With the one IP address I have from you right now, the second port will be dead as I suspected if I purchase and install it.
Every Ethernet port I have on my network is 1Gbps, except your modem which is 2.5 Gbps. I do not know of any Netgear routers with multiple 2.5 Gbps ports.
Lefty

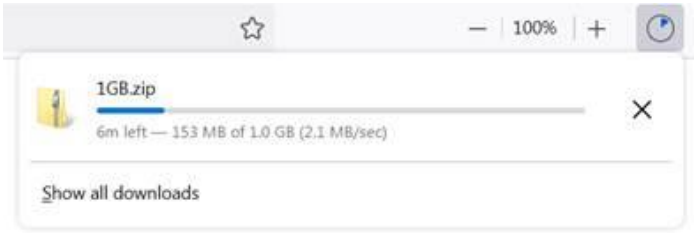
From: Spectrum OP VP [mailto: VP@charter.com]
Sent: Wednesday, June 07, 2023 1:47 PM
To: Lefty Insider <lefty@tcw.org>
Subject: RE: [EXTERNAL] RE: Dual port cable modems revisited

Thanks. How do you prefer to run the SamKnows test?
If we run it off the 1 GB/S port on your router we should get a consistent speed that is slightly less than the 1GB/S (~940 MB/s).
I am not sure how the test would work if we aggregate the links on the SB8200.
I suggest we run it off the nighthawk.
Thoughts?
VP

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Wednesday, June 07, 2023 2:13 PM
To: 'Spectrum OP VP' <VPOP@charter.com>
Subject: RE: [EXTERNAL] RE: Dual port cable modems revisited
Importance: High
VP,
First, knowing what I now know about this modem I will not consider buying a SB8200 unless I get a commitment from you for a second IP N/C, for the reasons I previously mentioned.
Secondly, I would be effectively buying this modem to do your testing for you, and I am rapidly running out of patience for that, as I previously mentioned.
Thirdly, I am going to assume that the Whitebox does not install between the modem and router, as you previously insisted, and that it will be plugged into my router and that it will in fact be part of the test configuration.
So let us run the Whitebox and see what happens before we consider swapping modems.
I am not looking for maximum speed, as latency is equally important, just your consistent provision of the speed I am paying you for.
This issue would be much more efficiently and effectively discussed over the phone,
Lefty

In a follow-up phone call from the VP, we agreed that they would send out a Whitebox with a Tech to install, despite my insistence that they did not need to send a Tech. Something having to do with company property I suspect.

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Thursday, June 08, 2023 9:01 AM
To: Spectrum OP VP' VP@charter.com; Senior VP' SVP@charter.com
Cc: ExecVP@charter.com; COO@charter.com; CTO@charter.com; ExecVP-NetOps@charter.com
Subject: What Internet Mbps _I_ buy from you is not logged and billed by usage. I buy and am billed based on a promise, a promise you have failed to keep.
Hello again VP et al,
While I await the SamKnows Whitebox for further testing, I thought I would provide more data and clarify my expectations.
Some further testing and playing around revealed some additional things.
So I downloaded 1GB.zip from https://www.thinkbroadband.com/download, based in the UK.

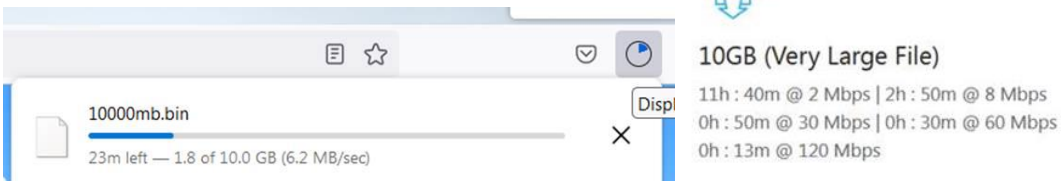


It took more than five minutes to download this file, which at 1Gbps, I should have had it less than ten seconds according to their chart below left. So according to this info, 2.1 MBytes per sec by my math equals about 16.8 Mbits per sec. A scant fraction of the 1000 Mbps that I am paying you for. $100 per month for 1000Mbps equals 10 cents per megabit that I am paying for now and have been for five years.

So according to that math, I should be paying you .10 x 16.8 Mbps or $1.68 per month for this level of bandwidth to the actual Internet worldwide. Call it long distance service if you like.

https://www.thinkbroadband.com/speedtest

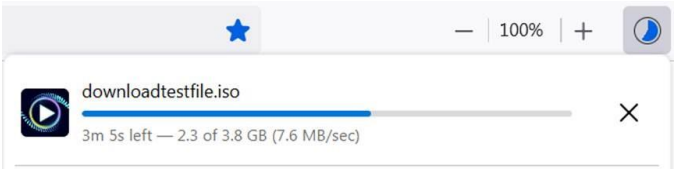
At an intermediate distance Colorado Data Center https://fastest.fish/test-files using server: **94.26.84.21**
This to my knowledge is geographically where much of the Charter Internet data center infrastructure is physically located.



More than 25 minutes to download, so according to this info, 6.2 MBytes per sec by my math equals about 49.6 Mbits per sec. A scant fraction of the 1000 Mbps that I am paying you for. $100 per month for 1000Mbps equals 10 cents per megabit that I am paying for now.

So according to that math, I should be paying you .10 x 49.6 Mbps or $4.96 per month for this level of bandwidth to US based Internet. You can call this intermediate service.

On *_your_* actual Charter/SPECTRUMNET, Milwaukee, for the third test:
Slightly better to my website in Milwaukee at 80 miles distance.
Five minutes plus to download a 3.8 GB file from https://tcw.org/testfiledownload.iso
I should be seeing something approaching a 125 MBps (not 7-10) reading for an honest 1000 Mbps advertised speed connection.



So according to this info, 7.6 MBytes per sec by my math equals about 60.8 Mbits per sec. A scant fraction of the 1000 Mbps that I am paying you for. $100 per month for 1000Mbps equals 10 cents per megabit that I am paying for now.

So according to that math, I should be paying you .10 x 60.8 Mbps or $6.08 per month for this level of bandwidth to your *_local_* SPECTRUMNET. You can call this local service.

So look, I know that Spectrum is a Tier Three Internet provider and you buy your Internet from a Tier Two provider, (maybe even Charter) who in turn buys theirs from a Tier One who is actually on the Internet backbone in Chicago or Minneapolis. My connection to the actual Internet, outside of the Charter/SPECTRUMNET where you have full control, is governed by your various transit and peering agreements (allocations/ payments) among all these companies at IXP's. I buy Internet, not SPECTRUMNET, from you in Mbps, you buy or pay for yours by Mbps.

The difference is that what Internet Mbps *_you_* buy is logged and billed by usage, from one or more of these Internet Exchange Points (IXP's)

MadIX - Madison Internet eXchange Peering Point Madison, WI
MKE-IX - Milwaukee Internet Exchange Milwaukee, WI
ChIX - Chicago Internet eXchange Chicago, IL
EQIX-CHI - Equinix Exchange Chicago, IL
MICE - Midwest Internet Cooperative Exchange Minneapolis, Minnesota

https://www.peeringdb.com/asn/2011
https://www.datacentermap.com/datacenters.html
https://www.spectrum.com/content/dam/spectrum/residential/en/policies/ip-interconnection/Charter SFI Policy - rev. Jan-2022.pdf

What Internet Mbps _I_ buy from you is not logged and billed by usage. I buy based on a promise, a promise you have repeatedly failed to keep according to my very extensive and relentless testing.

At the end of the day what I am saying here, with supporting facts, is that I am not getting what I am paying for. I should actually only pay for only what I get.
Your corporate responsibility under the laws of this country, is that your advertising claims must be reasonably substantiated.

And I have been showing and telling you that for the past three years with more than **80,000 words**, and hundreds of graphics, not to mention something approaching a thousand distinct test results.

Prove your 1Gbps speeds with SamKnows

Don't let LAN spoil the party. If you're an ISP providing a service faster than 1Gbps and struggling to prove it to your customers, SamKnows has the solution! Embed the SamKnows Router SDK inside your fleet of routers and overcome the Ethernet/Wi-Fi LAN interface bottleneck. Show your customers with a 1Gbps LAN interface that you're delivering on your ultra-fast advertising claims. https://samknows.com/blog/prove-your-1Gbps-speeds

But let us now get yet another opinion.
Here is what my old buddy has to say on this subject:

Do ISPs really pay speedtest.net to "QoS up" their results?

ChatGPT 3.5

There is no definitive evidence to suggest that Internet Service Providers (ISPs) pay Speedtest.net to prioritize their results. Speedtest.net is a popular internet speed testing service provided by Ookla, and it is widely used by individuals to measure their internet connection speed.

Ookla has stated that they do not accept payment from ISPs to alter or prioritize speed test results. They claim to have strict policies in place to prevent any manipulation or bias in their testing process. Ookla also allows users to run speed tests on their website for free, and they offer paid services for enterprise customers.

However, it's important to note that ISPs may employ various techniques to optimize their network performance, especially for popular speed testing services like Speedtest.net. This can include routing and traffic optimization to ensure faster speeds during speed tests. While this may result in more favorable speed test results, it doesn't necessarily mean that ISPs are paying or manipulating the tests directly.

It's always a good idea to consider using multiple speed testing services and conducting tests at different times to get a more comprehensive picture of your internet connection speed. Additionally, if you suspect that your ISP is deliberately manipulating your speeds, you can contact consumer protection agencies or regulatory bodies in your country to file a complaint and seek assistance.

Looking forward to a written reaction to this new data from your network engineers,
Lefty

The above message was not only copied to the Charter/Spectrum C-suite but also Bcc'd to others, journalists, politicians, and state and federal government agencies:
reporter@jrn.com>; 'FCC' <consumercomplaints@fcc.gov>; 'support@cyberlynk.net'; 'datcphotline@wisconsin.gov'; 'antitrust@ftc.gov'; 'tammy.baldwin@senate.gov'; 'whistleblower@ronjohnson.senate.gov'

Responses varied from not at all, to the annoying, and the ridiculous. See directly below.

Hello. You have reached an e-mail address which is not monitored by the FCC's Consumer Help Center. ##- Please type your reply above this line -##

From: FCC [mailto:consumercomplaints@fcc.gov]
Sent: Thursday, June 08, 2023 9:01 AM
To: Lefty Insider <lefty@tcw.org>
Subject: Request received: What Internet Mbps _I_ buy from you is not logged and billed by usage. I buy and am billed based on a promise, a promise you have failed to keep.

##- Please type your reply above this line -##
Hello. You have reached an e-mail address which is not monitored by the FCC's Consumer Help Center. With this automated response, it is our goal to provide you additional information so that you can get the assistance that you are seeking.
If you would like to file a new consumer complaint, please go to the Consumer Help Center directly at: https://consumercomplaints.fcc.gov. From there, you can select the category that best matches your issue and complete the form. Once you submit the form, you will receive an email with the ticket number associated with your complaint and information about what to expect from the process.
If you submitted a prior consumer complaint and would like to add information to that complaint, you can do so by replying to the email you received after you submitted the complaint. Please note that email would have included the ticket number for your complaint.
If you no longer have access to the email and/or have further questions, you can contact the FCC's Consumer Call Center Monday through Friday from 8:00 am - 5:30 pm est at (888) 225-5322 for additional assistance.
Thank you,
FCC Consumer Help Center
Consumer and Governmental Affairs Bureau

From: ANTITRUST [mailto:ANTITRUST@ftc.gov]
Sent: Thursday, June 08, 2023 9:01 AM
To: Lefty Insider <lefty@tcw.org>
Subject: Automatic reply: What Internet Mbps _I_ buy from you is not logged and billed by usage. I buy and am billed based on a promise, a promise you have failed to keep.
Thank you for your email. Please be assured that all incoming emails are forwarded to the appropriate FTC office for review.
You can also be certain that the FTC is devoted to policing unfair business conduct harmful to Americans. Please understand that in some instances the volume of communication we receive is such that we cannot respond individually to each message.
The FTC also cannot provide legal advice or take action on behalf of private individuals.
You have our assurance, however, that all incoming messages receive careful consideration.
Thank you again for contacting the FTC.
Office of Policy and Coordination, Bureau of Competition

As far as the politicians go…

From: postmaster@routing.senate.gov
Sent: Thursday, June 08, 2023 9:03 AM
To: lefty@tcw.org
Subject: Undeliverable: What Internet Mbps _I_ buy from you is not logged and billed by usage. I buy and am billed based on a promise, a promise you have failed to keep.
Delivery has failed to these recipients or groups:
whistleblower@ronjohnson.senate.gov
The recipient's mailbox is full and can't accept messages now. Please try resending your message later, or contact the recipient directly.
The following organization rejected your message: V-ESS-EXB5.senate.ussenate.us.
Diagnostic information for administrators:
Generating server: V-ESS-EXB2.senate.ussenate.us

-----Original Message-----
From: Mail Delivery System [mailto:Mailer-Daemon@eau.a2u2.com]
Sent: Friday, June 09, 2023 9:38 AM
To: lefty@tcw.org
Subject: Warning: message 1q7GBz-002t7x-Vd delayed 24 hours
This message was created automatically by mail delivery software.
A message that you sent has not yet been delivered to one or more of its recipients after more than 24 hours on the queue on eau.a2u2.com.
The message identifier is: 1q7GBz-002t7x-Vd
The subject of the message is: What Internet Mbps _I_ buy from you is not logged and billed by usage. I buy and am billed based on a promise, a promise you have failed to keep.
The date of the message is: Thu, 8 Jun 2023 09:00:34 -0500
The address to which the message has not yet been delivered is: tammy.baldwin@senate.gov
No action is required on your part. Delivery attempts will continue for some time, and this warning may be repeated at intervals if the message remains undelivered. Eventually the mail delivery software will give up, and when that happens, the message will be returned to you.

So that was a big ~~strike out~~ in contacting my Federal Senators via email.

So I decided to resend that email to the FCC via their Broadband Access Experience program and got the following response, of course assigned me yet another Ticket Number which I am sure they will _never_ be able to reconcile with the previous ones.

From: FCC [mailto:consumercomplaints@fcc.gov]
Sent: Thursday, June 08, 2023 10:53 AM
To: Lefty Insider <lefty@tcw.org>
Subject: Request received: Broadband Access Experience Form - Submission
##- Please type your reply above this line -##
Hi Lefty,
Thank you for sharing your story. Your Ticket No. is 6263554.
As part of the FCC's ongoing efforts to combat digital discrimination, we have established this Broadband Access Experience Form where consumers can share their unique experiences and challenges in obtaining broadband internet access. By sharing their broadband access stories, consumers will help the FCC to identify barriers experienced by historically unserved and underserved communities and inform the work of the Task Force.
For more information about the Task Force to Prevent Digital Discrimination and its work, please visit the Task Force's webpage at:https://www.fcc.gov/task-force-prevent-digital-discrimination
Thank you

The response from the WI DATCP indicated the need to complete a form.

From: egov-admin, CRM [mailto:noreply@wisconsin.gov]
Sent: Thursday, June 08, 2023 10:40 AM
To: lefty@tcw.org
Subject: RE: What Internet Mbps _I_ buy from you is not logged and billed by usage CRM:0025083
Good Morning.
Thank you for contacting the Bureau of Consumer Protection; part of the Wisconsin Department of Agriculture, Trade and Consumer Protection (DATCP). We may need more information in order to best start a complaint on this billing issue, and look into this matter for you.

If you would like to file a complaint, please select the complaint form, from the links provided below. Provide as much information as possible, but feel free to skip a question if you do not know the answer. Alternately, if you are unable to provide the additional information electronically, and would like us to send a paper copy of the form and information, please reply with your mailing request. Be sure to include your complete mailing address including zip code.
Additional information you may find helpful, including general information about our complaint process, is also attached below.
Have a good day.
This email contains the information you requested from the State of Wisconsin Bureau of Consumer Protection. Please click on the link(s) below to download the documents.
Thank you for your inquiry.
Filing a Complaint (https://datcp.wi.gov/Pages/Publications/FilingAComplaint127.aspx)
Telecommunications (https://datcp.wi.gov/Pages/Publications/Telecommunications193.aspx)
Telecommunications (https://datcp.wi.gov/Pages/Publications/Telecommunications193.aspx)
Information & Education Unit
Bureau of Consumer Protection, Division of Trade and Consumer Protection
Wisconsin Department of Agriculture, Trade and Consumer Protection
2811 Agriculture Drive, PO Box 8911 Madison, WI 53708-8911
Phone: (800) 422-7128 Fax: (608) 224-4677
Email: datcphotline@wisconsin.gov
Website: datcp.wisconsin.gov

If you drill around on these links, none of which are specific, you will eventually get to https://mydatcp.wi.gov/Complaints/complaint/create/0c43c589-da19-e511-af89-0050568c06ae which allows a character limited Complaint Description and does not allow attachments. So basically useless, and yes I did share that opinion with them on the "brief survey". https://submit.jotform.com/63393850199164

It seems that this brief survey response of mine generated a phone call from the DATCP a few hours later. He assured me that the original email complaint went into their system and had I gone past the limited description complaint area on their website I would have seen a place to attach a file. This however would have just been redundant. They are now working on making this attachment fact more discoverable.

Anyway we had a nice chat and he remembered that we had spoken two years ago and so I was able to brief him on the newest aspects of what is really the same case. If that actually accomplishes anything this time, we shall have to wait and see, as it *did not* two years ago. Certainly the Whitebox test result should be harder for Spectrum to dispute.

Since I could not get them to "show their homework" with their testing data, I should be able to show it to them with SamKnows data.

Brave Search Summarizer

The SamKnows Whitebox is a hardware test agent that measures your fixed-line internet performance by connecting to your router and running scheduled, automated tests under controlled network conditions.

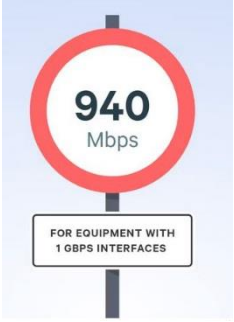
It accurately measures the performance of your internet under a variety of metrics, and all test results can be viewed in your SamKnows One dashboard.

You can also export and download these metrics as a report, which you can then share with your internet service provider.

The Whitebox discounts all interfering in-home factors beyond an ISP's control, leaving you with the most accurate dataset possible.

SamKnows is the world leader in internet performance measurement and is used by ISPs, governments, academics, and consumers to ensure the quality of their internet connectivity.

The Whitebox 9 is a solution for super-fast broadband monitoring all the way up to 2.5 Gbps.1



When 1000 equals 940
(It should actually be 980 since I have jumbo packets turned on in the computers /router.)

Then of course we need to go back and ask my old buddy for its opinion:

Is the SamKnows Whitebox an accurate Internet speed test?

ChatGPT 3.5

The SamKnows Whitebox is generally considered to be a reliable and accurate tool for measuring internet speeds. SamKnows is a company that specializes in internet performance measurement and monitoring, and their Whitebox is a dedicated hardware device designed to collect data about internet speeds, latency, and other performance metrics.

The SamKnows Whitebox operates by regularly running automated speed tests from your internet connection to various servers around the world. It measures both download and upload speeds, as well as other metrics such as latency, jitter, and packet loss. The data collected by the Whitebox is sent to SamKnows for analysis, and users can access their own test results through the SamKnows dashboard.

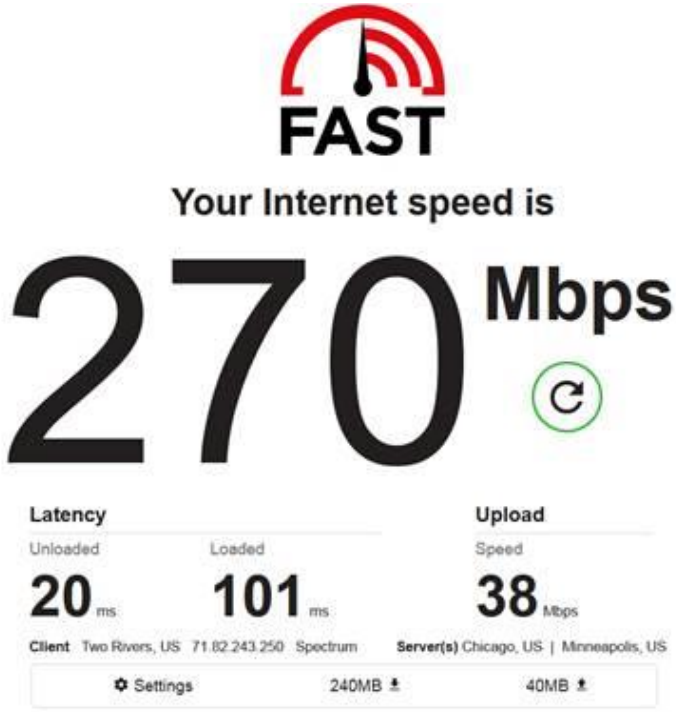
While no speed test is perfect and there can be variations due to various factors, the SamKnows Whitebox is designed to provide consistent and accurate measurements over time. It uses multiple test servers and performs tests at regular intervals to ensure reliable data collection. However, it's worth noting that the accuracy of any speed test can be influenced by factors such as network congestion, the performance of your own devices, and the quality of your internet service provider.

If you are experiencing internet performance issues or are interested in monitoring your connection's performance over time, using the SamKnows Whitebox can be a useful tool to gain insights and identify potential problems.

It looks like SamKnows, *knows* away around the monopoly to get my modem bandwidth data.

6/10 Received a phone call from a Spectrum Tech today, wanting to come and install the Whitebox later today. Now I can soon say "show me the data". Better yet, I will be able to see it myself.

Meanwhile, a new test looking at my Internet connection performance on Netflix, (fast.com) revealed a few more things. It is interesting that my IP address was recently changed, without me noticing until now, to a whole new subnet, 71.xx.xxx.xxx. Was 24.xxx.xxx.xxx.



This test represents substandard download and upload speeds on a 1000/40 Mbps connection. The loaded latency when compared to the unloaded latency also indicates ***buffer bloat.***

> **Bufferbloat** is a cause of high latency and jitter in packet-switched networks caused by excess buffering of packets. Bufferbloat can also cause packet delay variation (also known as jitter), as well as reduce the overall network throughput. When a router or switch is configured to use excessively large buffers, even very high-speed networks can become practically unusable for many interactive applications like voice over IP (VoIP), audio streaming, online gaming, and even ordinary web browsing. https://en.wikipedia.org/wiki/Bufferbloat

My buddy had a lot to say on this subject as well.
Tell me about Bufferbloat

ChatGPT 3.5

Bufferbloat refers to a phenomenon that occurs in computer networks, particularly in the context of internet connections. It refers to excessive buffering of data packets within network devices such as routers and switches. This excessive buffering can lead to increased latency, or delay, in the network, causing degraded performance and poor user experience.

The term "Bufferbloat" was coined by Jim Gettys and Kathleen Nichols in 2011 to describe the growing problem of excessive buffering in network devices. Traditionally, network buffers were designed to handle temporary congestion by storing packets temporarily until they can be transmitted. However, with the increase in internet speeds and the proliferation of high-bandwidth applications, network buffers have become larger to accommodate bursts of traffic.

The larger buffers, while intended to prevent packet loss, can inadvertently lead to increased latency. When data packets arrive at a network device, such as a router, with a large buffer, they can be stored for longer periods before being forwarded. This delay can cause increased round-trip times and make network applications, such as web browsing, video streaming, and online gaming, feel sluggish and unresponsive.

Bufferbloat can have a significant impact on network performance, especially in situations where the network is experiencing congestion. Instead of managing congestion by dropping or prioritizing packets, the excess buffering delays packet transmission, leading to increased latency and decreased throughput. This can result in increased buffer occupancy, which exacerbates the problem and creates a vicious cycle.

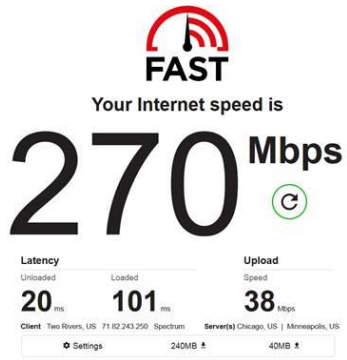
To address Bufferbloat, several solutions have been proposed and implemented. One approach is the use of active queue management (AQM) algorithms, such as Random Early Detection (RED) or Controlled Delay (CoDel). These algorithms aim to manage the buffer occupancy by dropping or marking packets when the buffer reaches a certain threshold, thus reducing latency and preventing excessive buffering.

Another solution is the deployment of Quality of Service (QoS) mechanisms, which prioritize certain types of traffic, such as real-time voice or video, over other traffic types. By giving higher priority to time-sensitive traffic, QoS can help mitigate the effects of Bufferbloat on critical applications.

Furthermore, efforts are underway to improve the design of network devices and protocols to better handle congestion. For example, the ongoing development of the next-generation internet protocol, IPv6, includes features that aim to address Bufferbloat more effectively.

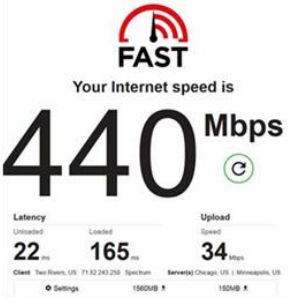
Overall, Bufferbloat is a problem that can degrade network performance and user experience by introducing excessive buffering and latency. However, with the implementation of appropriate congestion control mechanisms and improvements in network infrastructure, it is possible to mitigate the effects of Bufferbloat and improve overall network performance.

On another note, it was Interesting for me to discover that my IP address was recently changed to a whole new subnet, 71.xx.xxx.xxx, was 24.xxx.xxx.xxx since the last upgrade/modem replacement for about four years.
Do you know why this happened, or what caused this?
On the testing of Netflix…



But I can also get this and this:

Or this:



This test to fast.com is really 23.194.154.71 (registered to Akamai) represents substandard download and upload speeds on a 1000 Mbps connection from Charter/Spectrum.
The loaded latency when compared to the unloaded latency also indicates ***buffer bloat.***

So you apparently cache Netflix content on your Akamai datacenter CDN network servers, but yet you have enough internal network congestion to cause this Bufferbloat.

Tracing route to a23-194-154-71.deploy.static.akamaitechnologies.com [23.194.154.71] over a maximum of 30 hops:

```
 1   <1 ms    1 ms   <1 ms  192.168.1.1
 2    *       *       *     Request timed out.
 3   11 ms    9 ms    8 ms  lag-63-10.dtr01twrvwi.netops.charter.com [96.34.23.212]
 4   14 ms   12 ms   11 ms  lag-204.crr01stptwi.netops.charter.com [96.34.30.25]
 5   15 ms   15 ms   17 ms  lag-400.crr01euclwi.netops.charter.com [96.34.24.83]
 6   15 ms   16 ms   16 ms  lag-101.bbr01euclwi.netops.charter.com [96.34.1.20]
 7   23 ms   23 ms   15 ms  lag-5.bbr02euclwi.netops.charter.com [96.34.0.7]
 8   36 ms   31 ms   31 ms  lag-1.bbr01chcgil.netops.charter.com [96.34.0.9]
 9   77 ms   29 ms   29 ms  lag-801.prr01chcgil.netops.charter.com [96.34.3.9]
10   29 ms   30 ms   29 ms  096-034-152-019.biz.spectrum.com [96.34.152.19]
11    *       *       *     Request timed out.
12    *       *       *     Request timed out.
13    *       *       *     Request timed out.
14   29 ms   29 ms   28 ms  a23-194-154-71.deploy.static.akamaitechnologies.com [23.194.154.71]
Trace complete.
```

On testing Prime Video:
I have yet to find a good speed test for this service.
Lefty

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Saturday, June 10, 2023 3:04 PM
To: 'Spectrum OP VP' <VPOP@charter.com>
Cc: datcphotline@wisconsin.gov
Subject: Netflix testing
VP,
Your Tech called. He will install the Whitebox this afternoon.
He showed up and we installed it, he took a 2.5 Gbps SFP[19] module out of his pocket and plugged it into the SFP port on the unit. He verified with someone via phone that it was viewable on their end and working.
He did not have login credentials for me and claimed to know nothing about this.
After we installed the Whitebox, using my Cat7 cable and my UPS power connection, I showed him the poor Netflix results and he pretended to not know anything about fast.com. I explained that I had traced this test to an Akamai server in the Charter Denver datacenter and he gave me a deer in the headlights look.
I showed him the poor file download speed from my website ISP and he claimed that my ISP CyberLynk had me throttled to 80 Mbps. That statement tripped my bullshit detector into rapid beep mode.

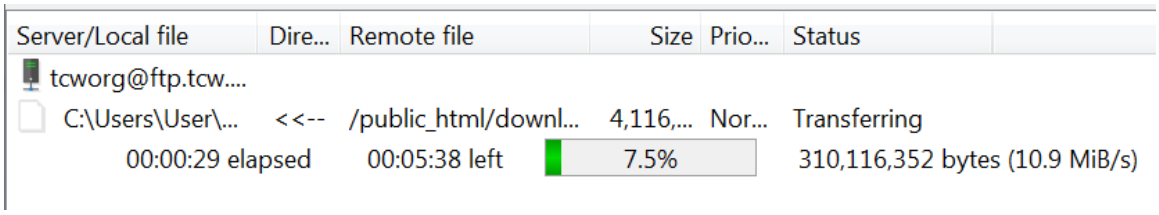
Note: CyberLynk uses noction.com to spread their Internet bandwidth across SIX different Internet providers in their Milwaukee datacenter to ensure the best/fastest routes in/out on a 10 Gbps backbone. Exact bandwidth data is unavailable and are considered trade secrets.

[19] *Small Form-factor Pluggable (SFP) is a compact, hot-pluggable network interface module format used for both telecommunication and data communications applications*

Here is a quote from one of the owners:

"We have no good way of knowing if traffic is being throttled somewhere or by who. All we have to go off of is from my desk the speeds are 600-900Mbps for FTP transfers and we are not hearing complaints from other customers."

Ok, so before you think that I am doing HTTP downloads and not FTP, have a look at this FileZilla FTP result:



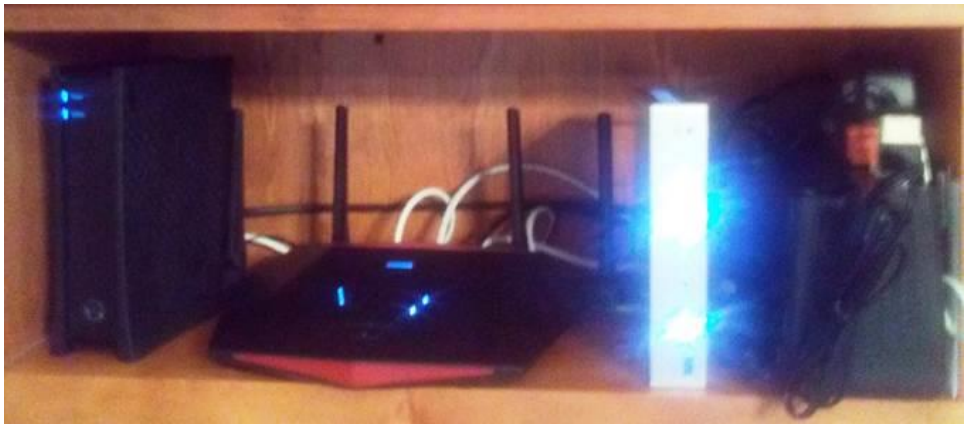
The same roughly 91MBps speed after converting MiB/s to MBps

I asked him for a Charter server to download a file from and his face went blank again.
Due to my questioning, I believe, he was in a sudden hurry to leave he tried to take the empty box with him with the unused components (5e patch cable, wireless antennas, and install instructions), with him but I finally convinced him that the box should stay here to put the unit back into when the test are completed. Weird behavior.
So per the outlines of our verbal agreement, I have unplugged this Whitebox until I have the login info to allow me to access the test data, and the ability to create my own granular (non-generic) tests.
Lefty

From: Spectrum OP VP [mailto: VP@charter.com]
Sent: Saturday, June 10, 2023 4:08 PM
To: Lefty Insider <lefty@tcw.org>
Subject: RE: [EXTERNAL] Netflix testing

I believe you have access to the Whitebox data. I will get the details on the login on Monday.
One other point is Akamai is a caching service used by many content providers. We do not operate their services. Netflix buffering is a common issue and not related to how we run the Spectrum network.
VP

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Saturday, June 10, 2023 10:21 PM
To: 'Spectrum OP VP' <VPOP@charter.com>
Subject: RE: [EXTERNAL] Netflix testing
VP,
Ok, you can email or phone the login credentials.
If the caching servers sit inside your CDN datacenter then yes, I would think that your network congestion could have an impact. It really does not matter who owns or services the caching servers, in my view. Charter/Spectrum should have full control over their behavior.
I do not understand how you can say that buffering and any resultant Bufferbloat is unrelated. My Mbps are coming directly from your network.
Btw, the Netflix speeds are also low and erratic like my other tests.
PS. What is up with the IP change?
Lefty



SamKnows Whitebox (living in a black box world)

Brave Search Summarizer

Wehe is an application that allows users to verify if their Internet provider respects the neutrality of the network. It uses your device to exchange internet traffic recorded from popular apps like YouTube and Spotify, making it appear as if you are using those apps. Wehe can be downloaded and installed on Windows 10, 8, 7, computers, and Mac using Android emulators like NOX APK player or BlueStacks. The installation process involves installing the NOx app player on PC and logging in to your Google account. Wehe can also be used on PC without using your phone.

This work is supported by the National Science Foundation, a Google Faculty Research Award, Arcep, Verizon Labs and Amazon and administered by David Choffnes at Northeastern University.

Tell me about Wehe

ChatGPT 3.5

Wehe is a research project and mobile app developed by Northeastern University that aims to detect and analyze potential violations of net neutrality. While Wehe can provide insights into the behavior of specific applications on your network, it is not primarily designed as a general-purpose internet speed testing tool.

The main purpose of Wehe is to examine whether internet service providers (ISPs) are treating different types of network traffic differently, potentially violating net neutrality principles. It does this by analyzing the behavior of specific apps, such as video streaming or file sharing apps, and comparing their performance under different network conditions.

While Wehe can give you information about how specific apps are being treated by your ISP, it may not provide an accurate measurement of your overall internet speed. For general internet speed testing purposes, it is recommended to use dedicated speed testing tools like Ookla's Speedtest.net or Fast.com, as they are designed specifically for measuring internet speed and are widely recognized in the industry.

If your goal is to determine your internet speed accurately, it's best to use established speed testing services that have a proven track record and are widely used and trusted by users and ISPs alike.

Meanwhile I did some additional research on other speed testing methodologies.

SamKnows, RIPE Atlas, and Wehe speed tests are generally referred to as active measurement tests, meaning that they attempt to measure network performance by introducing new traffic into the network, “probe traffic”, as opposed to just observing traffic passing over a network interface to map transport or infer performance, ala Wireshark. In both cases the best results will be measure over time, i.e. every one or two hours for a month or more.

RIPE Atlas is a global network of probes that measure Internet connectivity and reachability, providing an unprecedented understanding of the state of the Internet in real time. This can be either hardware of software.

There are thousands of active probes in the RIPE Atlas network, and it is continually growing. The RIPE NCC collects data from this network and provides Internet maps, data tools and visualizations based on the aggregated results. RIPE Atlas users who host a probe can also use the entire RIPE Atlas network to conduct customized measurements that provide valuable data about their own network. Wikipedia

Sample Network Probes

From: RIPE Atlas (no reply) [mailto:no-reply@ripe.net]
Sent: Monday, June 12, 2023 6:35 AM
To: Lefty Insider <lefty@tcw.org>
Subject: Your application 31921 is in the waiting list - out of stock 0323

Hey there!
Thanks for applying to host a RIPE Atlas probe! Unfortunately, we're out of stock right now due to a global component shortage.
We'll review your application, and if your ASN and location fall under our priority coverage areas, we will approve your application and place you on a waiting list. This way, you'll be first in line as soon as we receive more probes. If you would rather not wait for a hardware probe - take a look at our RIPE Atlas software probes. They're easy to install on your (VM) machine or router, and you'll still be part of our awesome community of probe hosts working to make the Internet more stable and reliable.
You can find all the instructions you need at:
https://github.com/RIPE-NCC/ripe-atlas-probe-doc/tree/master/manuals.

Thanks again for your support, and let's keep working together to make the Internet better!
Kind regards,
RIPE Atlas Team

What is the Internet speed tester M-Lab?

ChatGPT 3.5

The Internet speed test called "Measurement Lab (M-Lab) Network Diagnostic Tool" or "Wehe" is a specialized tool designed to measure whether an Internet service provider (ISP) is applying discriminatory practices, such as throttling or blocking specific applications or services.

Wehe was developed by researchers at Northeastern University and the University of Massachusetts Amherst to detect and analyze potential violations of net neutrality principles. It uses a variety of techniques to assess how different internet applications and services perform on a given network.

When you run the Wehe test, it simulates the traffic patterns of popular applications like YouTube, Netflix, Skype, and others, and measures any deviations in their performance caused by ISP interference. The test results provide insights into whether your ISP is treating certain types of Internet traffic differently or imposing restrictions on specific applications.

Wehe is primarily focused on analyzing net neutrality violations and does not give a comprehensive assessment of your overall internet speed or network performance.

I also did some additional reading. Some highlights from a recent article I read:

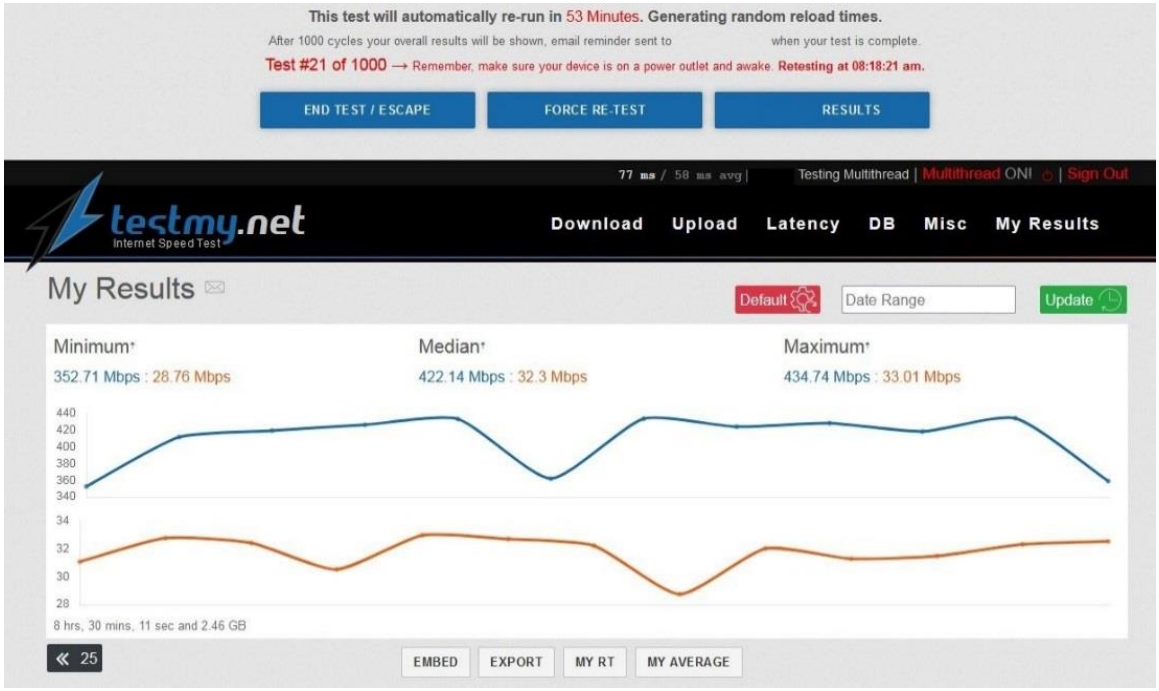
Transit and interconnect capacity. Another significant consideration is the connection to "transit" and "middle mile" networks. The interconnects between independently operated networks may also introduce throughput bottlenecks. As user speeds reach
1Gbps, ensuring that there are no capacity constraints on the path between the user and test server— especially across transit networks—is a major consideration. In one incident in 2013, a bottleneck in the Cogent transit network reduced NDT throughput measurements by as much as 90%. Test results improved when Cogent began prioritizing NDT test traffic over other traffic. Transit-related issues have often affected speed tests. In the case of the FCC's MBA platform, this prompted them to add servers on the Level 3 network to isolate the issues experienced with M-Lab's infrastructure and the Cogent network, and M-Labs has also added additional transit networks to reduce their reliance on one network. Middleboxes. End-to-end paths often have devices along the path, called "middleboxes," which can affect performance. For example, a middlebox may perform load balancing or security functions (for example, malware detection, firewalls). As access speeds increase, the capacity of middleboxes may increasingly be a constraint, which will mean test results will reflect the capacity of those middleboxes rather than the access link or other measurement target. Rate-limiting. Application-layer or destination-based rate limiting, often referred to as throttling, can also cause the performance that users experience to diverge from conventional speed tests. Choffnes et al. have developed Wehe, which detects application- layer rate limiting; thus far, the research has focused on HTTP-based video streaming de-prioritization and rate-limiting. Such rate limiting could exist at any point on the network path, though most commonly it may be expected in an access network or on the destination server network. In the latter case, virtual servers or other hosted services may be priced by peak bitrate and therefore a hard-set limit on total peak bitrate or per-user-flow bitrate may exist. Web software such as Nginx has features for configuring rate limiting, as cloud-based services may charge by total network usage or peak usage; for example, Oracle charges for total bandwidth usage, and FTP services often enforce
DECEMBER 2020 | VOL. 63 | NO. 12 | COMMUNICATIONS OF THE ACM
Nick Feamster (feamster@uchicago.edu) is the Neubauer
Professor in the Computer Science Department and Director of the Center for Data and Computing at the University of Chicago, IL, USA.
Jason Livingood (jason_livingood@comcast.com) is Vice President at Comcast.

6/12 Got a call from the VP today explaining why he could not keep his promise of allowing me access to the Whitebox test data, or to run my own tests. I agreed to plug the Whitebox back in and he agreed to share the data tomorrow but could not be nailed down as to what form that would take. It is complicated, but he is going out of his way on this situation so I decided to trust him, not necessarily Charter/Spectrum.

Anyway I decided to run my own automated tests to testmy.net continuously every hour for one thousand times, and send him a prelim test result and graph.

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Tuesday, June 13, 2023 7:57 AM
To: 'Spectrum OP VP' <VPOP@charter.com>
Subject: FW: Speed Test DONE!
VP,
This is what it looks like so far testing from my end.
Lefty

From: TestMy.net Test Monitor [mailto:monitor@testmy.net]
Sent: Tuesday, June 13, 2023 7:25 AM
To: lefty@tcw.org
Subject: Speed Test DONE!
Hi Lefty,
Here's your last speed test result on Spectrum.
359.2 Mbps Down :: 32.6 Mbps Up
4% slower than your Download average :: Comparable to your Upload average
- TestMy.net



Well, the VP did not call with Whitebox test data today. So I sent him some of mine.

TestMy.net is Proprietary

Our proprietary testing method uses HTML5 standard and is unlike any other speed test in existence. We have no need to make any adjustments to your results. When you test here the numbers returned are precise up to 0.0001 and are not doctored in any way. Unlike the vast majority of speed tests out there, TestMy calls it how it sees it! https://testmy.net/legit-speed-test.php

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Tuesday, June 13, 2023 2:35 PM
To: 'Spectrum OP VP' <VPOP@charter.com>
Cc: datcphotline@wisconsin.gov; antitrust@ftc.gov; 'FCC' <consumercomplaints@fcc.gov>
Subject: TestMy dot net speed testing

Vice President Operations
Charter Communications
Newest testing continues to reveal substandard (<50%) performance on my 1000Mbps connection.
Lefty

13 hops ping ponging around the CHARTERNET, from Two Rivers WI, to Denver CO, to Ashburn VA, through Chicago Equinix (colocation data center) and CLOUDFLARENET (content delivery network or CDN) to testmy.net (172.67.73.68) speed test server supposed to be in Colorado Springs, CO. nearly a 5000 mile trip. But perhaps cached in a CDN server in Denver?

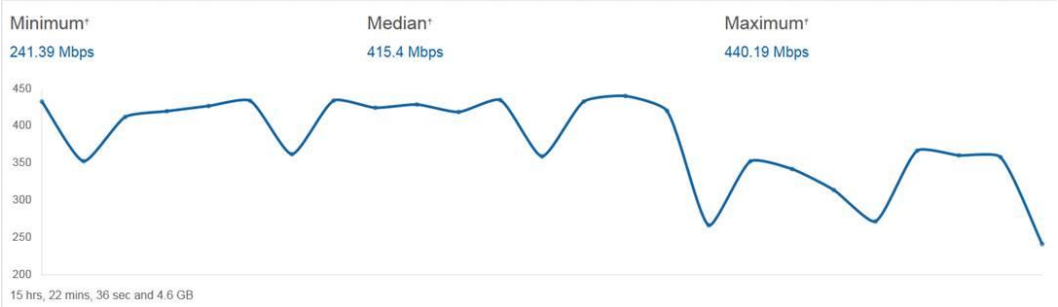
#	Country	Town	Lat	Lon	IP	Hostname	Latency (ms)	DNS Lookup (ms)	Distance to previous node (km)
1	United States	Two Rivers	44.166	-87.5832	192.168.1.1	(None)	2	93	0
2	*	*	44.166	-87.5832	*	*	0	0	0
3	United States	(Unknown)	37.751	-97.822	96.34.23.212	lag-63-10.dtr01twrvwi.netops.charter.com	12	81	1116
4	United States	(Unknown)	37.751	-97.822	96.34.30.20	lag-223.crr01ftbgwi.netops.charter.com	17	79	0
5	United States	(Unknown)	37.751	-97.822	96.34.25.137	lag-700.crr02rochmn.netops.charter.com	23	54	0
6	United States	(Unknown)	37.751	-97.822	96.34.25.166	lag-2.crr01rochmn.netops.charter.com	22	51	0
7	United States	(Unknown)	37.751	-97.822	96.34.25.0	lag-207.crr01stcdmn.netops.charter.com	26	52	0
8	*	*	37.751	-97.822	*	*	0	0	0
9	United States	Ashburn	39.0469	-77.4903	96.34.1.149	lag-1.bbr02chcgil.netops.charter.com	50	52	1775
10	United States	Ashburn	39.0469	-77.4903	96.34.3.11	lag-802.prr01chcgil.netops.charter.com	93	70	0
11	United States	(Unknown)	37.751	-97.822	208.115.136.180	13335.chi.equinix.com	55	50	1775
12	United States	(Unknown)	37.751	-97.822	172.71.252.2	(None)	51	54	0
13	United States	(Unknown)	37.751	-97.822	172.67.73.68	(None)	51	55	0
							402	**691**	**4666**

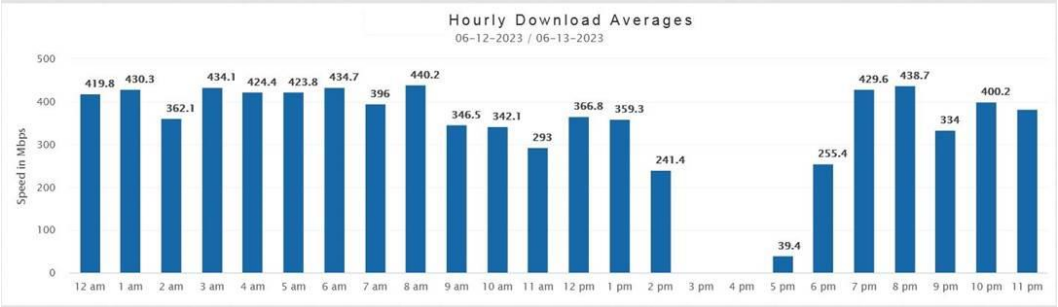
```
C:\Users\User>tracert 172.71.252.2
Tracing route to 172.71.252.2 over a maximum of 30 hops

  1    2 ms     2 ms     3 ms  192.168.1.1
  2    *        *        *     Request timed out.
  3   12 ms    18 ms    20 ms  lag-63-10.dtr01twrvwi.netops.charter.com [96.34.23.212]
  4   17 ms    20 ms    21 ms  lag-204.crr01stptwi.netops.charter.com [96.34.30.25]
  5   18 ms    18 ms    24 ms  lag-400.crr01euclwi.netops.charter.com [96.34.24.83]
  6   18 ms    19 ms    18 ms  lag-100.bbr01euclwi.netops.charter.com [96.34.2.153]
  7   28 ms    31 ms    23 ms  lag-5.bbr02euclwi.netops.charter.com [96.34.0.7]
  8   37 ms    39 ms    39 ms  lag-1.bbr01chcgil.netops.charter.com [96.34.0.9]
  9   42 ms    30 ms    38 ms  lag-801.prr01chcgil.netops.charter.com [96.34.3.9]
 10   34 ms    38 ms    34 ms  096-034-152-083.biz.spectrum.com [96.34.152.83]
 11   34 ms    37 ms    32 ms  172.71.252.2
Trace complete.

C:\Users\User>tracert 172.67.73.68
Tracing route to 172.67.73.68 over a maximum of 30 hops

  1    3 ms     2 ms     2 ms  192.168.1.1
  2    *        *        *     Request timed out.
  3   11 ms    10 ms    11 ms  lag-63-10.dtr01twrvwi.netops.charter.com [96.34.23.212]
  4   24 ms    24 ms    23 ms  lag-204.crr01stptwi.netops.charter.com [96.34.30.25]
  5   18 ms    18 ms    23 ms  lag-400.crr01euclwi.netops.charter.com [96.34.24.83]
  6   20 ms    23 ms    22 ms  lag-100.bbr01euclwi.netops.charter.com [96.34.2.153]
  7   27 ms    23 ms    23 ms  lag-5.bbr02euclwi.netops.charter.com [96.34.0.7]
  8   34 ms    39 ms    39 ms  lag-1.bbr01chcgil.netops.charter.com [96.34.0.9]
  9  167 ms    31 ms    32 ms  lag-801.prr01chcgil.netops.charter.com [96.34.3.9]
 10   39 ms    52 ms    54 ms  13335.chi.equinix.com [208.115.136.180]
 11   35 ms    36 ms    33 ms  172.71.252.2
 12   34 ms    40 ms    33 ms  172.67.73.68
Trace complete.
```

These are the last two hops to testmy.net.

The true worth of an ISP

In our opinion the true value of an Internet service provider isn't always measured in megabits. Truly great providers maintain good peering relationships with other providers so their users sustain quality speeds throughout the Internet, not just near by. https://testmy.net/legit-speed-test.php





TMN is a TRUE speed test, plain and simple

Some ISPs question the legitimacy of many Internet speed testing sites, as they should, most of them aren't very good. At TestMy.net we are obsessed about accuracy. We have over 26 years of experience testing the World's Internet. TestMy.net's servers are on a network that has direct peering with some of the biggest names in the Internet backbone.

With multi-homed connectivity and bandwidth from over 25 independent Tier 1 carriers including Comcast, Cox, Time Warner, Charter, Qwest, Google, Level 3, Internap, NTT America, Equinix & Telefónica to name a few. The network has a total **capacity of over 2000 Gbps** and our servers have multiple gigabit uplinks into that network. TestMy is always overstocked with bandwidth and can meet the needs of even the most demanding connections.

The true worth of an ISP

In our opinion the true value of an Internet service provider isn't always measured in megabits. Truly great providers maintain good peering relationships with other providers so their users sustain quality speeds throughout the Internet, not just nearby.

What good is an Internet connection if you can only get your advertised speeds on your providers internal network (or on the edge of their network).

It's the INTERnet not INTRAnet. If you run a speed test elsewhere and get higher results than you get here, poor provider peering may be to blame. https://testmy.net/legit-speed-test.php

LE

Is testmy.net an accurate Internet speed test site?

ChatGPT 3.5

Testmy.net is a well-known and widely used internet speed test site. It provides users with the ability to measure their internet connection's download and upload speeds. While it is popular among users, it is important to note that no speed test is 100% accurate due to various factors that can affect network performance.

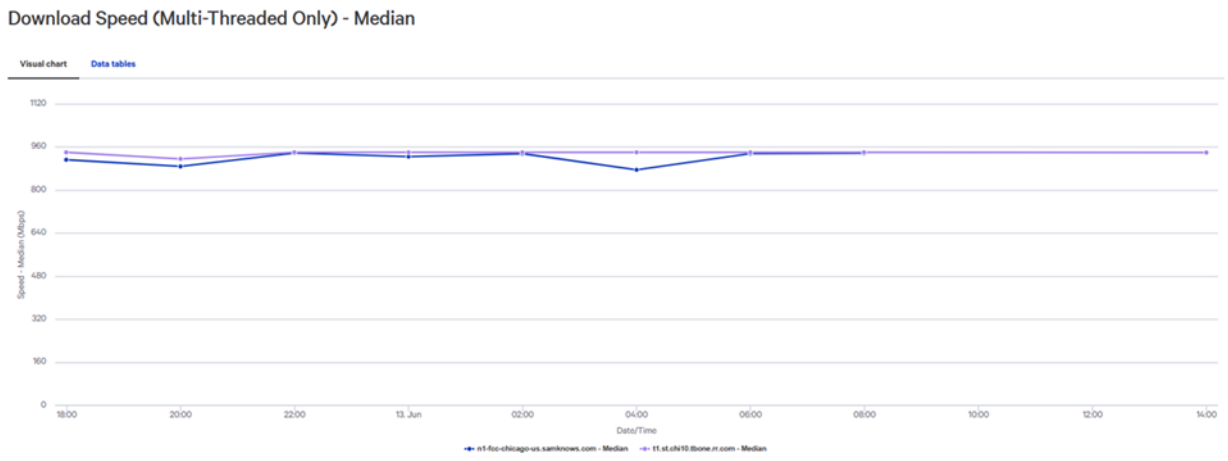
Testmy.net employs a methodology that attempts to minimize the impact of external factors on the speed test results, such as using multiple connections and larger file sizes for more accurate measurements. However, keep in mind that even with these efforts, factors like network congestion, server distance, and the overall health of your network can still influence the results.

It is generally a good idea to run speed tests from multiple sources to get a more comprehensive understanding of your internet connection's performance. Other commonly used speed test sites include Ookla's Speedtest.net, Fast.com by Netflix, and Google's speed test (search "speed test" on Google).

Remember that internet speed can vary throughout the day, so it's advisable to conduct tests at different times to gather a more accurate representation of your average connection speed.

From: Spectrum OP VP [mailto: VP@charter.com]
Sent: Wednesday, June 14, 2023 11:05 AM
To: Lefty Insider <lefty@tcw.org>
Subject: RE: [EXTERNAL] TestMy dot net speed testing

Lefty,
First day of testing on SamKnows is consistent and close to the max we can get thru the router port at 940 MB/S. As you can see the device tests two servers concurrently to compare separate routes.
VP



From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Wednesday, June 14, 2023 11:41 AM
To: 'Spectrum OP VP' <VPOP@charter.com>
Subject: RE: [EXTERNAL] TestMy dot net speed testing

VP,
Insufficient data here. I want to see what I would see on the SamKnows testing dashboard.
So these are the "median" not max or min speeds to samknows.com and to Chicago roadrunner.com.
I am unclear as to where this testing originates from.
I will assume that samknows.com is on a backbone of some kind and the rr.com server is on an IXP backbone. I remember having Time Warner Cable, Roadrunner Internet twenty years ago.
They are run from 6 PM on June 12 to 2 PM on June 13, so less than 24 hours.
I need to see much, much, more granular data over a much longer time frame.
Here are my latest test results:

Note also the substandard upload speeds,
Lefty

So then I receive an email from WI consumer protection in response to my emails. Classic government behavior, they want a generic form filled out that is not really responsive to my complaints. Email letter and form example below.

From: Kolb, Brian J - DATCP [mailto:Brian.Kolb@wisconsin.gov]
Sent: Wednesday, June 14, 2023 11:27 AM
To: lefty@tcw.org
Subject: Consumer Protection 142072
Dear Lefty Insider,
Please see the attached letter regarding the complaint you filed with the Department of Agriculture, Trade and Consumer Protection.
Sincerely,
Brian Kolb
Investigator-Mediation Unit
Bureau of Consumer Protection / Division of Trade and Consumer Protection
Wisconsin Department of Agriculture, Trade and Consumer Protection

2811 Agriculture Dr
Madison WI 53708-8911
Phone: (608) 224-4575
Fax: (608) 224-4677
Brian.kolb@wisconsin.gov

Please fill out our customer survey to help us improve. Thank you!

State of Wisconsin
Governor Tony Evers

Department of Agriculture, Trade and Consumer Protection
Secretary Randy Romanski

June 14, 2023

RE: File 142072 (Refer to this number when contacting our agency)
Charter Communications Inc
6399 S Fiddlers Green Cir Attn: W. Wesselman
Greenwood Vlg CO 80111-4949

Dear

Thank you for contacting the Department of Agriculture, Trade and Consumer Protection concerning Charter Communications Inc regarding Charter Communications. I have reviewed the information you provided but before I can assist you I need additional information concerning your complaint.

- **Completed Complaint form with description of complaint.**

Please provide this information to me at your earliest convenience. After I receive the information from you, I will initiate mediation of your complaint.

Thank you again for bringing this matter to my attention.

Sincerely,

Brian Kolb
Consumer Protection Investigator
Mediation Unit
Bureau of Consumer Protection
Telephone: (608) 224-4575 FAX (608) 224-4677
Email: Brian.kolb@wisconsin.gov

Enc.: Complaint Form

Wisconsin - America's Dairyland
2811 Agriculture Drive • PO Box 8911 • Madison, WI 53708-8911 • Wisconsin.gov
An equal opportunity employer

Department of Agriculture, Trade and Consumer Protection

Telecommunications

Please attach copies (both sides) of all documentation that supports your complaint, such as: invoices, receipts, contracts, cancelled checks, advertisement/catalog page showing item ordered, lease documents, telephone bills.

1. How do we contact you?

Name: (Mr. Mrs. Miss Ms.) _____
(circle one) *(first)* *(middle)* *(last)*

Provide business name, if you are filing on behalf of a business: _____

Phone: Home ( ) _____ Work ( ) _____ ext. _____ Cell ( ) _____

Contact me between 8:00 A.M. and 4:00 P.M. at: *(circle one)* Home Work Cell Email: _____

Address: _____ Apt.# _____ PO Box: _____
(Provide business address when filing on behalf of a business.)

City: _____ State: _____ Zip: _____ County: _____

All business telephone lines affected by complaint: _____

2. What business is your complaint against?

Name of business: _____

Address: _____ Ste.# _____ PO Box: _____

City: _____ State: _____ Zip: _____ County: _____

Phone: ( ) _____ Name of person you talked to: _____ Title: _____

Business email: _____ Business website: _____

Information about your complaint

3. Your complaint is about: *(check one or more)*

- ___ Cellular phone service
- ___ Long distance phone service
- ___ Internet web page provider
- ___ 900 # (Pay-per-call)
- ___ Pay telephone service
- ___ Unsolicited facsimile
- ___ Dial-around service (e.g. 10-10-XXX)
- ___ Local phone service
- ___ Internet service provider
- ___ Calling card
- ___ Cable television
- ___ Satellite TV service
- ___ Other, please explain: _____

4. Which of the following best describes your first contact with the business: *(check one)*

- ___ Internet
- ___ Email
- ___ I responded to a radio or TV ad
- ___ I responded to a printed advertisement
- ___ Person from business came to my home
- ___ Person from business called me
- ___ Business sent me information in the mail
- ___ I attended a convention or trade show
- ___ I went to the business
- ___ I telephoned the business

5. When did your first contact with the business occur? month: _____ day: _____ year: _____

6. Your age or age of person who spoke to business? Age: *(circle one)* 0-17 18-61 62 or older

7. What product or service did you buy? *(please be specific)* _____

8. Were you billed for a service or product you <u>did not order</u> (unauthorized charges)? *(circle one)* No Yes

9. How much were you charged? $_____

10. Was the item advertised? *(circle one)* No Yes Date: _____ Where: _____

11. Did you sign a contract/agreement? *(circle one)* No Yes If yes, contract/agreement number: _____

12. Where were you when you signed the contract/agreement? _____ Date signed: _____

13. Amount paid: $ _____ by: *(circle one)* cash check credit card financed money transfer other plan

IMPORTANT: More questions on the back page (over) I:\ dtcp\common\Fact Sheets\ComplaintFormTelecom311 (09/21)

From: Kolb, Brian J - DATCP [mailto:Brian.Kolb@wisconsin.gov]
Sent: Wednesday, June 14, 2023 2:26 PM
To: lefty@tcw.org
Subject: Consumer Protection 142072
Dear Lefty Insider,
Please see the attached letter regarding the complaint you filed with the Department of Agriculture, Trade and Consumer Protection.
Sincerely,
Brian Kolb
Investigator-Mediation Unit
Bureau of Consumer Protection / Division of Trade and Consumer Protection
Wisconsin Department of Agriculture, Trade and Consumer Protection
2811 Agriculture Dr
Madison WI 53708-8911
Phone: (608) 224-4575
Fax: (608) 224-4677
Brian.Kolb@wisconsin.gov

Please fill out our customer survey to help us improve. Thank you!

State of Wisconsin
Governor Tony Evers

Department of Agriculture, Trade and Consumer Protection
Secretary Randy Romanski

June 14, 2023

RE: File 142072 (Refer to this number when contacting our agency)
Charter Communications Inc
6399 S Fiddlers Green Cir Attn: W. Wesselman
Greenwood Vlg CO 80111-4949

Dear

Thank you for contacting the Department of Agriculture, Trade and Consumer Protection. I have written to the business to try and assist you to find a solution to your complaint. I asked them to review your concerns and then contact me to discuss what may be done to resolve your complaint. The company may also contact you directly.

Your patience is appreciated during this process. It is not possible to tell exactly how long the mediation process will take. Some situations can be handled within a few weeks, but complicated matters may take many months. I will advise you, in writing, of the disposition of your complaint once I have received and thoroughly reviewed the written response from the company.

If you wish to pursue this matter outside of our mediation efforts, please contact a private attorney to discuss your legal remedies or file in small claims court. A fact sheet on small claims court is available on our website at datcp.wi.gov.

Thank you again for bringing your complaint to our attention.

Sincerely,

Brian Kolb
Consumer Protection Investigator
Mediation Unit
Bureau of Consumer Protection
Telephone: (608) 224-4575 FAX (608) 224-4677
Email: Brian.kolb@wisconsin.gov

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Thursday, June 15, 2023 10:38 AM
To: 'Spectrum OP VP' <VPOP@charter.com>
Subject: SamKnows speed testing
VP,
This is in response to the test results you recently sent.
What I would like to see is more expansive and granular test data that I would see in a SamKnows dashboard.
The way I understand this testing, the software in the Whitebox sends out algorithmic probe traffic to streaming media and social media sites.
This probe traffic originates from the Whitebox through the user router and not from the ISP hub router.
It measures the return traffic from these sites.
In addition, an end user can also create their own granular test site selections.
This is the way that SamKnows, Wehe, and RIPE Atlas work to my understanding.
I still want to see traffic to an IXP backbone, but also to and from the sites I actually use like:

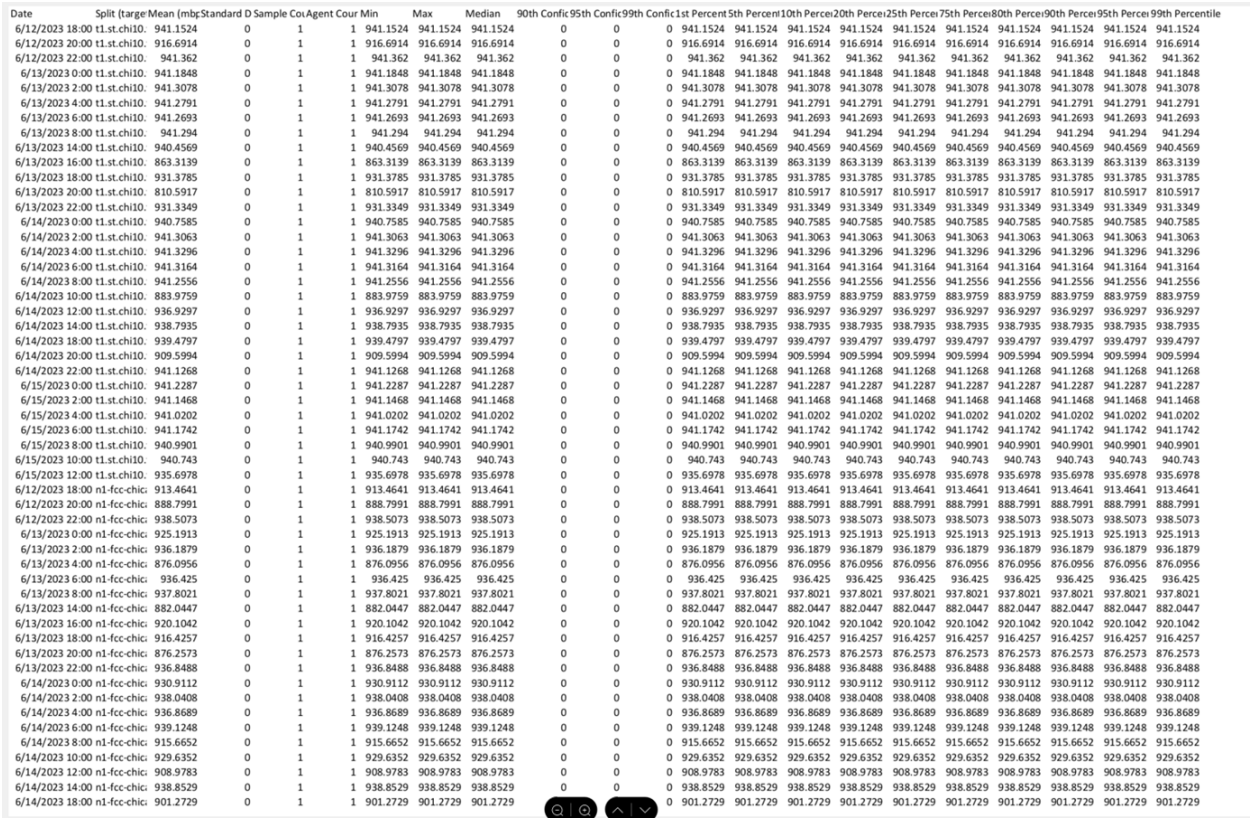
1. CyberLynk.net (tcw.org, ftp.tcw.org, mail.tcw.org)
2. Netflix (netflix.com)
3. Prime Video (amazon.com)
4. YouTube (youtube.com)
5. Twit.tv
6. Wikipedia.org
7. Stitcher.com
8. Democracynow.org/
9. TheIntercept.com/
10. TheGuardian.com/us

This will provide a more realistic or real-world analysis of my Internet connection.
Lefty

From: Spectrum OP VP [mailto: VP@charter.com]
Sent: Thursday, June 15, 2023 2:17 PM
To: Lefty Insider <lefty@tcw.org>
Subject: RE: [EXTERNAL] SamKnows speed testing
Mr. Insider,
We are following the SamKnows protocols to test the network we are responsible for operating which is consistent with the approach the FCC takes in testing ISP network performance.

Measuring downloads speeds from their sites you list below does not identify if we are operating our network in and efficient manner and providing the level of service that we are accountable for. We do not control how the sites route their traffic or determine their server capacity or many other items that can impact download speeds.

Here is more granular data from the SamKnows device that is running off your router. As you can see it is fairly consistent and does not show the same variability you are seeing off your testing protocol. We are also beginning to perform similar tests off the hub site to be able to make additional comparisons in the network. We will continue to test in this manner.
VP



Date	Split (targe	Mean (mbp	Standard D	Sample Cou	Agent Cour	Min	Max	Median	90th Confic	95th Confic	99th Confic	1st Percent	5th Percen	10th Percen	20th Percen	25th Percen	75th Percen	80th Percen	90th Percen	95th Percen	99th Percentile
6/12/2023 18:00	t1.st.chi10.	941.1524	0	1	1	941.1524	941.1524	941.1524	0	0	0	941.1524	941.1524	941.1524	941.1524	941.1524	941.1524	941.1524	941.1524	941.1524	941.1524
6/12/2023 20:00	t1.st.chi10.	916.6914	0	1	1	916.6914	916.6914	916.6914	0	0	0	916.6914	916.6914	916.6914	916.6914	916.6914	916.6914	916.6914	916.6914	916.6914	916.6914
6/12/2023 22:00	t1.st.chi10.	941.362	0	1	1	941.362	941.362	941.362	0	0	0	941.362	941.362	941.362	941.362	941.362	941.362	941.362	941.362	941.362	941.362
6/13/2023 0:00	t1.st.chi10.	941.1848	0	1	1	941.1848	941.1848	941.1848	0	0	0	941.1848	941.1848	941.1848	941.1848	941.1848	941.1848	941.1848	941.1848	941.1848	941.1848
6/13/2023 2:00	t1.st.chi10.	941.3078	0	1	1	941.3078	941.3078	941.3078	0	0	0	941.3078	941.3078	941.3078	941.3078	941.3078	941.3078	941.3078	941.3078	941.3078	941.3078
6/13/2023 4:00	t1.st.chi10.	941.2791	0	1	1	941.2791	941.2791	941.2791	0	0	0	941.2791	941.2791	941.2791	941.2791	941.2791	941.2791	941.2791	941.2791	941.2791	941.2791
6/13/2023 6:00	t1.st.chi10.	941.2693	0	1	1	941.2693	941.2693	941.2693	0	0	0	941.2693	941.2693	941.2693	941.2693	941.2693	941.2693	941.2693	941.2693	941.2693	941.2693
6/13/2023 8:00	t1.st.chi10.	941.294	0	1	1	941.294	941.294	941.294	0	0	0	941.294	941.294	941.294	941.294	941.294	941.294	941.294	941.294	941.294	941.294
6/13/2023 14:00	t1.st.chi10.	940.4569	0	1	1	940.4569	940.4569	940.4569	0	0	0	940.4569	940.4569	940.4569	940.4569	940.4569	940.4569	940.4569	940.4569	940.4569	940.4569
6/13/2023 16:00	t1.st.chi10.	863.3139	0	1	1	863.3139	863.3139	863.3139	0	0	0	863.3139	863.3139	863.3139	863.3139	863.3139	863.3139	863.3139	863.3139	863.3139	863.3139
6/13/2023 18:00	t1.st.chi10.	931.3785	0	1	1	931.3785	931.3785	931.3785	0	0	0	931.3785	931.3785	931.3785	931.3785	931.3785	931.3785	931.3785	931.3785	931.3785	931.3785
6/13/2023 20:00	t1.st.chi10.	810.5917	0	1	1	810.5917	810.5917	810.5917	0	0	0	810.5917	810.5917	810.5917	810.5917	810.5917	810.5917	810.5917	810.5917	810.5917	810.5917
6/13/2023 22:00	t1.st.chi10.	931.3349	0	1	1	931.3349	931.3349	931.3349	0	0	0	931.3349	931.3349	931.3349	931.3349	931.3349	931.3349	931.3349	931.3349	931.3349	931.3349
6/14/2023 0:00	t1.st.chi10.	940.7585	0	1	1	940.7585	940.7585	940.7585	0	0	0	940.7585	940.7585	940.7585	940.7585	940.7585	940.7585	940.7585	940.7585	940.7585	940.7585
6/14/2023 2:00	t1.st.chi10.	941.3063	0	1	1	941.3063	941.3063	941.3063	0	0	0	941.3063	941.3063	941.3063	941.3063	941.3063	941.3063	941.3063	941.3063	941.3063	941.3063
6/14/2023 4:00	t1.st.chi10.	941.3296	0	1	1	941.3296	941.3296	941.3296	0	0	0	941.3296	941.3296	941.3296	941.3296	941.3296	941.3296	941.3296	941.3296	941.3296	941.3296
6/14/2023 6:00	t1.st.chi10.	941.3164	0	1	1	941.3164	941.3164	941.3164	0	0	0	941.3164	941.3164	941.3164	941.3164	941.3164	941.3164	941.3164	941.3164	941.3164	941.3164
6/14/2023 8:00	t1.st.chi10.	941.2556	0	1	1	941.2556	941.2556	941.2556	0	0	0	941.2556	941.2556	941.2556	941.2556	941.2556	941.2556	941.2556	941.2556	941.2556	941.2556
6/14/2023 10:00	t1.st.chi10.	883.9759	0	1	1	883.9759	883.9759	883.9759	0	0	0	883.9759	883.9759	883.9759	883.9759	883.9759	883.9759	883.9759	883.9759	883.9759	883.9759
6/14/2023 12:00	t1.st.chi10.	936.9297	0	1	1	936.9297	936.9297	936.9297	0	0	0	936.9297	936.9297	936.9297	936.9297	936.9297	936.9297	936.9297	936.9297	936.9297	936.9297
6/14/2023 14:00	t1.st.chi10.	938.7935	0	1	1	938.7935	938.7935	938.7935	0	0	0	938.7935	938.7935	938.7935	938.7935	938.7935	938.7935	938.7935	938.7935	938.7935	938.7935
6/14/2023 18:00	t1.st.chi10.	939.4797	0	1	1	939.4797	939.4797	939.4797	0	0	0	939.4797	939.4797	939.4797	939.4797	939.4797	939.4797	939.4797	939.4797	939.4797	939.4797
6/14/2023 20:00	t1.st.chi10.	909.5994	0	1	1	909.5994	909.5994	909.5994	0	0	0	909.5994	909.5994	909.5994	909.5994	909.5994	909.5994	909.5994	909.5994	909.5994	909.5994
6/14/2023 22:00	t1.st.chi10.	941.1268	0	1	1	941.1268	941.1268	941.1268	0	0	0	941.1268	941.1268	941.1268	941.1268	941.1268	941.1268	941.1268	941.1268	941.1268	941.1268
6/15/2023 0:00	t1.st.chi10.	941.2287	0	1	1	941.2287	941.2287	941.2287	0	0	0	941.2287	941.2287	941.2287	941.2287	941.2287	941.2287	941.2287	941.2287	941.2287	941.2287
6/15/2023 2:00	t1.st.chi10.	941.1468	0	1	1	941.1468	941.1468	941.1468	0	0	0	941.1468	941.1468	941.1468	941.1468	941.1468	941.1468	941.1468	941.1468	941.1468	941.1468
6/15/2023 4:00	t1.st.chi10.	941.0202	0	1	1	941.0202	941.0202	941.0202	0	0	0	941.0202	941.0202	941.0202	941.0202	941.0202	941.0202	941.0202	941.0202	941.0202	941.0202
6/15/2023 6:00	t1.st.chi10.	941.1742	0	1	1	941.1742	941.1742	941.1742	0	0	0	941.1742	941.1742	941.1742	941.1742	941.1742	941.1742	941.1742	941.1742	941.1742	941.1742
6/15/2023 8:00	t1.st.chi10.	940.9901	0	1	1	940.9901	940.9901	940.9901	0	0	0	940.9901	940.9901	940.9901	940.9901	940.9901	940.9901	940.9901	940.9901	940.9901	940.9901
6/15/2023 10:00	t1.st.chi10.	940.743	0	1	1	940.743	940.743	940.743	0	0	0	940.743	940.743	940.743	940.743	940.743	940.743	940.743	940.743	940.743	940.743
6/15/2023 12:00	t1.st.chi10.	935.6978	0	1	1	935.6978	935.6978	935.6978	0	0	0	935.6978	935.6978	935.6978	935.6978	935.6978	935.6978	935.6978	935.6978	935.6978	935.6978
6/12/2023 18:00	n1-fcc-chic:	913.4641	0	1	1	913.4641	913.4641	913.4641	0	0	0	913.4641	913.4641	913.4641	913.4641	913.4641	913.4641	913.4641	913.4641	913.4641	913.4641
6/12/2023 20:00	n1-fcc-chic:	888.7991	0	1	1	888.7991	888.7991	888.7991	0	0	0	888.7991	888.7991	888.7991	888.7991	888.7991	888.7991	888.7991	888.7991	888.7991	888.7991
6/12/2023 22:00	n1-fcc-chic:	938.5073	0	1	1	938.5073	938.5073	938.5073	0	0	0	938.5073	938.5073	938.5073	938.5073	938.5073	938.5073	938.5073	938.5073	938.5073	938.5073
6/13/2023 0:00	n1-fcc-chic:	925.1913	0	1	1	925.1913	925.1913	925.1913	0	0	0	925.1913	925.1913	925.1913	925.1913	925.1913	925.1913	925.1913	925.1913	925.1913	925.1913
6/13/2023 2:00	n1-fcc-chic:	936.1879	0	1	1	936.1879	936.1879	936.1879	0	0	0	936.1879	936.1879	936.1879	936.1879	936.1879	936.1879	936.1879	936.1879	936.1879	936.1879
6/13/2023 4:00	n1-fcc-chic:	876.0956	0	1	1	876.0956	876.0956	876.0956	0	0	0	876.0956	876.0956	876.0956	876.0956	876.0956	876.0956	876.0956	876.0956	876.0956	876.0956
6/13/2023 6:00	n1-fcc-chic:	936.425	0	1	1	936.425	936.425	936.425	0	0	0	936.425	936.425	936.425	936.425	936.425	936.425	936.425	936.425	936.425	936.425
6/13/2023 8:00	n1-fcc-chic:	937.8021	0	1	1	937.8021	937.8021	937.8021	0	0	0	937.8021	937.8021	937.8021	937.8021	937.8021	937.8021	937.8021	937.8021	937.8021	937.8021
6/13/2023 14:00	n1-fcc-chic:	882.0447	0	1	1	882.0447	882.0447	882.0447	0	0	0	882.0447	882.0447	882.0447	882.0447	882.0447	882.0447	882.0447	882.0447	882.0447	882.0447
6/13/2023 16:00	n1-fcc-chic:	920.1042	0	1	1	920.1042	920.1042	920.1042	0	0	0	920.1042	920.1042	920.1042	920.1042	920.1042	920.1042	920.1042	920.1042	920.1042	920.1042
6/13/2023 18:00	n1-fcc-chic:	916.4257	0	1	1	916.4257	916.4257	916.4257	0	0	0	916.4257	916.4257	916.4257	916.4257	916.4257	916.4257	916.4257	916.4257	916.4257	916.4257
6/13/2023 20:00	n1-fcc-chic:	876.2573	0	1	1	876.2573	876.2573	876.2573	0	0	0	876.2573	876.2573	876.2573	876.2573	876.2573	876.2573	876.2573	876.2573	876.2573	876.2573
6/13/2023 22:00	n1-fcc-chic:	936.8488	0	1	1	936.8488	936.8488	936.8488	0	0	0	936.8488	936.8488	936.8488	936.8488	936.8488	936.8488	936.8488	936.8488	936.8488	936.8488
6/14/2023 0:00	n1-fcc-chic:	930.9112	0	1	1	930.9112	930.9112	930.9112	0	0	0	930.9112	930.9112	930.9112	930.9112	930.9112	930.9112	930.9112	930.9112	930.9112	930.9112
6/14/2023 2:00	n1-fcc-chic:	938.0408	0	1	1	938.0408	938.0408	938.0408	0	0	0	938.0408	938.0408	938.0408	938.0408	938.0408	938.0408	938.0408	938.0408	938.0408	938.0408
6/14/2023 4:00	n1-fcc-chic:	936.8689	0	1	1	936.8689	936.8689	936.8689	0	0	0	936.8689	936.8689	936.8689	936.8689	936.8689	936.8689	936.8689	936.8689	936.8689	936.8689
6/14/2023 6:00	n1-fcc-chic:	939.1248	0	1	1	939.1248	939.1248	939.1248	0	0	0	939.1248	939.1248	939.1248	939.1248	939.1248	939.1248	939.1248	939.1248	939.1248	939.1248
6/14/2023 8:00	n1-fcc-chic:	915.6652	0	1	1	915.6652	915.6652	915.6652	0	0	0	915.6652	915.6652	915.6652	915.6652	915.6652	915.6652	915.6652	915.6652	915.6652	915.6652
6/14/2023 10:00	n1-fcc-chic:	929.6352	0	1	1	929.6352	929.6352	929.6352	0	0	0	929.6352	929.6352	929.6352	929.6352	929.6352	929.6352	929.6352	929.6352	929.6352	929.6352
6/14/2023 12:00	n1-fcc-chic:	908.9783	0	1	1	908.9783	908.9783	908.9783	0	0	0	908.9783	908.9783	908.9783	908.9783	908.9783	908.9783	908.9783	908.9783	908.9783	908.9783
6/14/2023 14:00	n1-fcc-chic:	938.8529	0	1	1	938.8529	938.8529	938.8529	0	0	0	938.8529	938.8529	938.8529	938.8529	938.8529	938.8529	938.8529	938.8529	938.8529	938.8529
6/14/2023 18:00	n1-fcc-chic:	901.2729	0	1	1	901.2729	901.2729	901.2729	0	0	0	901.2729	901.2729	901.2729	901.2729	901.2729	901.2729	901.2729	901.2729	901.2729	901.2729

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Thursday, June 15, 2023 5:07 PM
To: 'Spectrum OP VP' <VPOP@charter.com>
Cc: datcphotline@wisconsin.gov; aaron.romens@wisconsin.gov; 'Kolb, Brian J - DATCP' <Brian.Kolb@wisconsin.gov>; 'FCC' <consumercomplaints@fcc.gov>; antitrust@ftc.gov
Subject: RE: [EXTERNAL] SamKnows speed testing

VP,
First of all, these screenshots are too visually poor and inadequate for my analysis or understanding as I previously mentioned.
If I had a .csv file I could at least chart or graph it.
The only thing I can see on this screenshot is Mbps variances on _your_ network of about 130Mbps. So more than ten percent.
But again, I don't know what I am looking at here, because ***you haven't' explained it other than to say here is a big dump of a bunch of numbers that say it is "all good". Trust us.***
I am sure that your software allows for various visualization techniques which you could forward.
You have as yet to share your testing particulars. What are the entry and termination URL's or IP addresses for these data streams?

If I understand this data correctly, the start point is my router, and the end point is your Roadrunner server or a SamKnows server. So this is just data moving across your network.
It ignores the fact that people do not want access to your network, other than to get access to the wider Internet. You buy your Mbps just like me, as you are just a middleman reseller pipeline company.
Except that your transit and peering agreements with Tier One backbone operators determine my Mbps across the wider Internet to a great extent.

You continue to try to obfuscate and opaque the real issue by claiming a lack of control _*or*_ responsibility for the **Internet** service you promise to provide.
Nothing in your advertising or the EUA speak to limitations of your service being 200 geographical miles nor being constrained to within your own CHARTERNET/SPECTRUMNET!

"level of service that we are accountable for."
Your customer here is ME (and those in NE Wisconsin) not the FCC. I am the one who signs the checks that I send you. I am the one paying you .10 per each Megabit I am not receiving.

If I were Spectrum I would be more concerned about the FTC and DATCP than the FCC.
The Federal Trade Commission (FTC) requires advertisers to provide a reasonable basis for advertising and marketing claims. The process of demonstrating that "reasonable basis" is called claim substantiation. Claims requiring substantiation can be express or implied. A claim is implied if 20% or more of reasonable consumers would construe a particular meaning from the claim.

Below is a GlassWire screen shot from one of my computers. You will note that usage is for a single client machine, not an aggregate network total.
The podcast streaming here is not on the Charter network nor are any other sites I visit, unless cached somewhere on your network.

PS. I am not seeing any upload data from you here either. My results there are poor as well.
Personally, I am disappointed in the difference between your persona on the phone and what I am now seeing as a result of placing my trust in you,
and reversing my original requirement for login credentials to access this data before agreeing to connect this device.
Lefty

From: Spectrum OP VP [mailto: VP@charter.com]
Sent: Thursday, June 15, 2023 7:31 PM
To: Lefty Insider <lefty@tcw.org>
Subject: Re: [EXTERNAL] SamKnows speed testing
Let me see if I can get excel based data for U/S and D/S speeds.
VP
From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Friday, June 16, 2023 9:42 AM
To: 'Spectrum OP VP' <VPOP@charter.com>
Cc: datcphotline@wisconsin.gov; 'Kolb, Brian J - DATCP' <Brian.Kolb@wisconsin.gov>; aaron.romens@wisconsin.gov; 'FCC' <consumercomplaints@fcc.gov>; antitrust@ftc.gov
Subject: RE: [EXTERNAL] SamKnows speed testing

VP,
"We are following the SamKnows protocols to test the network we are responsible for operating which is consistent with the approach the FCC takes in testing ISP network performance."

Can you identify the origin, specifics of, or somehow further identify this FCC testing protocol?
I believe that the FCC testing protocol and the SamKnows testing protocol are in reality one in the same.
This statement is also inconsistent with my understanding of the SamKnows protocols, as briefly outlined below.

The SamKnows method of measuring internet performance
A typical speed test runs from a browser over a user's home network, to a router then out to a test server on the internet. Quality of Experience or QoE gives a much fuller and more realistic picture of the Internet performance a user is experiencing, because they test the real services people are using.
SamKnows specializes in these types of tests and can provide real time data on how well video conferencing, online games, social media networks or streaming services. to name a few, are performing on operators' networks. This level of data means real network problems that have an impact on big populations of Internet consumers.
For our regulatory studies, our methodology is to only use standardized 'off-net' measurement test servers. This means they are not installed inside an ISPs network, and instead sit outside at a neutral location. This ensures that ISP performance can be measured under the same conditions and avoids artificially biasing results for any one ISP over another. This is done to ensure that we are measuring the complete service that the ISP is providing, up to and including a common handover point to the wider Internet. SamKnows test servers must also meet a minimum hardware and connectivity specification. This ensures that all test servers used have acceptable connectivity and are not of a standard that would harm or lead to inaccurate data collection.
https://samknows.com/blog/testing-principles

Regarding the data dump screen shot and graph you sent:
Your end point server T1.st.chi10.tbone.rr.com a Chicago, Charter registered, (formerly Time Warner Cable named server) is actually 209.18.33.166 and is ping-able.
11 hops from me 200 geographical miles to Chicago, and cumulatively high ms response times.

C:\Users\User>tracert 209.18.33.166
Tracing route to t1.st.chi10.tbone.rr.com [209.18.33.166]
over a maximum of 30 hops:
 1 <1 ms <1 ms <1 ms 192.168.1.1
 2 * * * Request timed out.
 3 9 ms 9 ms 8 ms lag-63-10.dtr01twrvwi.netops.charter.com [96.34.23.212]
 4 12 ms 13 ms 11 ms lag-204.crr01stptwi.netops.charter.com [96.34.30.25]
 5 16 ms 16 ms 15 ms lag-400.crr01euclwi.netops.charter.com [96.34.24.83]
 6 16 ms 16 ms 15 ms lag-100.bbr01euclwi.netops.charter.com [96.34.2.153]
 7 17 ms 22 ms 23 ms lag-5.bbr02euclwi.netops.charter.com [96.34.0.7]
 8 30 ms 31 ms 31 ms lag-1.bbr01chcgil.netops.charter.com [96.34.0.9]
 9 * 36 ms * lag-300.chcgildt87w-bcr00.netops.charter.com [66.109.1.18]
10 28 ms 28 ms 29 ms lag-301.pr2.chi10.netops.charter.com [209.18.43.61]
11 29 ms 28 ms 29 ms t1.st.chi10.tbone.rr.com [209.18.33.166]
Trace complete.

My packets seem to go to from Two Rivers, WI to Stevens Point, WI to Eau Claire, WI on the way to Chicago, IL.

Your other end point server n1-fcc-chicago-us.samkows.com (apparently setup for the FCC on a SamKnows domain at some point) is actually 151.139.47.98 and is also ping-able.
Curiously however, this server is registered to StackPath, LLC in Dallas TX.

"StackPath is an edge computing platform for deploying, accelerating, and protecting workloads right at the edge of the Internet. They provide both infrastructure as a service and applications, running closer to end-users and devices to reduce the number of hops required." https://www.stackpath.com/platform/

Do not know if you are getting your money's worth here, as there are even more hops using them. My song *Got the Spectrum Blues* said that "six hops to anywhere were bringing me down".
14 hops to this Chicago server, taking mostly the same route also and cumulatively high ms response times.

C:\Users\User>tracert 151.139.47.98
Tracing route to n1-fcc-chicago-us.samknows.com [151.139.47.98] over a maximum of 30 hops
 1 <1 ms <1 ms <1 ms 192.168.1.1
 2 * * * Request timed out.
 3 9 ms 9 ms 9 ms lag-63-10.dtr01twrvwi.netops.charter.com [96.34.23.212]
 4 12 ms 12 ms 12 ms lag-204.crr01stptwi.netops.charter.com [96.34.30.25]
 5 16 ms 16 ms 15 ms lag-400.crr01euclwi.netops.charter.com [96.34.24.83]
 6 16 ms 16 ms 15 ms lag-101.bbr01euclwi.netops.charter.com [96.34.1.20]
 7 15 ms 22 ms 23 ms lag-5.bbr02euclwi.netops.charter.com [96.34.0.7]
 8 36 ms 30 ms 31 ms lag-1.bbr01chcgil.netops.charter.com [96.34.0.9]
 9 29 ms 30 ms 29 ms lag-801.prr01chcgil.netops.charter.com [96.34.3.9]
10 29 ms 28 ms 28 ms 151.139.44.3
11 * * * Request timed out.
12 30 ms 29 ms 29 ms 151.139.44.3
13 28 ms 31 ms 29 ms 151.139.44.13
14 29 ms 31 ms 29 ms 151.139.47.98
Trace complete

My packets seem to go from Two Rivers to Stevens Point to Eau Claire to Chicago and then finally on to Longueuil, Quebec, Canada? So this is the isolated FCC/SamKnows testing server?
I guess StackPath literally means what they say about that whole "edge of the Internet" stuff.

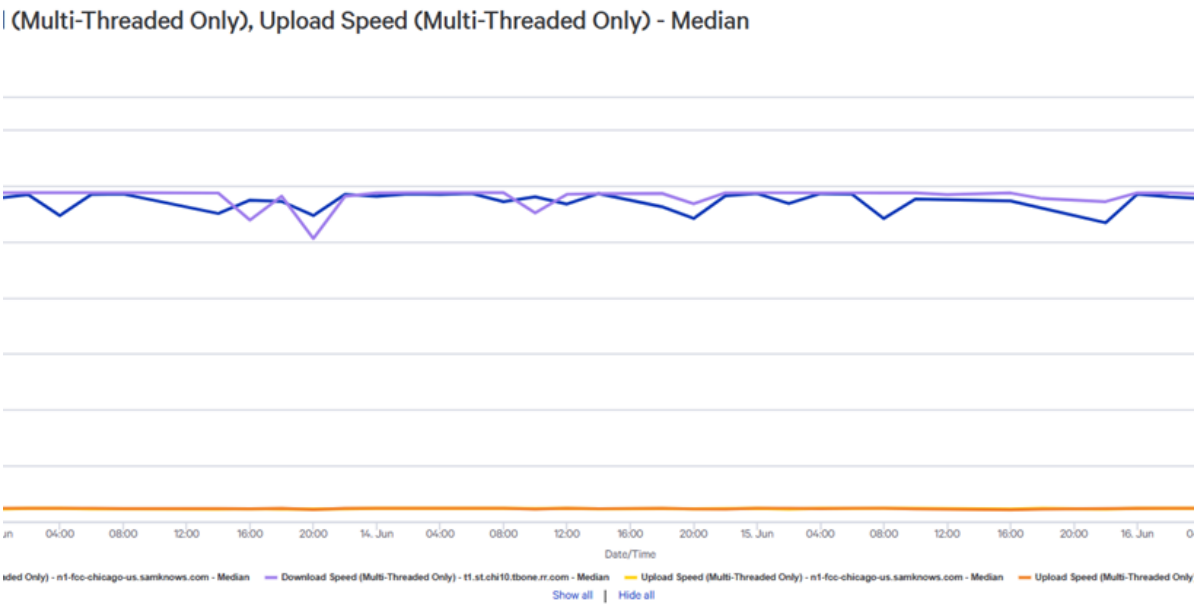
PS. A Spectrum Tech says my webserver ISP CyberLynk is throttling my download speeds, and you excuse this by saying that you cannot control what happens on the Wild, Wild Internet, so I have a solution to this dilemma. Put a multi Gigabyte file on your rr.com server (t1.st.chi10.tbone.rr.com [209.18.33.166]) in Chicago on your CHARTERNET/SPECTRUMNET so I can download it as a speed test. Or are you worried about your FTP (real world) download speeds?
Lefty

From: Spectrum OP VP [mailto: VP@charter.com]
Sent: Friday, June 16, 2023 3:40 PM
To: Lefty Insider <lefty@tcw.org>
Cc: datcphotline@wisconsin.gov; 'Kolb, Brian J - DATCP' <Brian.Kolb@wisconsin.gov>; aaron.romens@wisconsin.gov; 'FCC' <consumercomplaints@fcc.gov>; antitrust@ftc.gov
Subject: RE: [EXTERNAL] SamKnows speed testing
Lefty,
At some point we will need to agree to disagree that we have an obligation to ensure internet speed performance across the entirety of the world wide web. That being said, we are testing both on Spectrum network and off spectrum network as part of the SamKnows testing we are performing.

SamKnows provides a large variety of different tests, the point you made was referring to Quality of Experience tests, which are different than a standard speed test. SamKnows does allow for video conferencing, gaming, social media, and streaming service tests, however the US FCC does not currently report on these for the yearly FCC MBA program.

The issue was initially presented was related to not getting the speeds delivered that we promise, however that appears to have evolved into less of a local speed issue and more of an overall issue with performance your service once it leaves our network.

For our internal measurement Whiteboxes, we use on-net servers as that is the portion of our network we have control over; however we still test to the off-net servers for comparison. We have provided graphs that provide both our on-net and off-net server results. There had been no issue with your on net data. Reviewing the off-net performance only, the lowest data point we measure for downstream is ~856Mbps while running through his your personal CPE with a 1Gbps cap.
Additionally, the FCC server showing as belonging to StackPath, LLC is accurate. StackPath is the organization SamKnows partners with for their servers in the US.
We will continue to test your download and upload speeds via the SamKnows process.
I think the other item we should explore is understanding the differences with your test method and SamKnows when both using the speedtest server on Spectrum network. Understanding the reasons for these differences may solve the vast majority of your broader concern. Any thoughts why the “on net” results may differ between the two test methods?
Regards,
VP



https://www.tcw.org/Mr Insider 6-12-2023 to 6-16-2023_download.pdf
https://www.tcw.org/Mr Insider 6-12-2023 to 6-16-2023_upload.pdf

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Saturday, June 17, 2023 4:38 PM
To: 'Spectrum OP VP' <VP>; 'Senior VP' <SVP@charter.com>
Cc: datcphotline@wisconsin.gov; 'Kolb, Brian J - DATCP' <Brian.Kolb@wisconsin.gov>; aaron.romens@wisconsin.gov; antitrust@ftc.gov; 'FCC' <consumercomplaints@fcc.gov>
Subject: RE: [EXTERNAL] SamKnows speed testing

"At some point we will need to agree to disagree that we have an obligation to ensure internet speed performance across the entirety of the world wide web"

VP,
Well that statement is not only incorrect but also more than a bit disingenuous.
Those of us who date back a bit understand that there is definite distinction between the World Wide Web and the Internet. Just as there is a difference between a 200 mile radius CHARTERNET/SPECTRUMNET and an actual INTERNET connection. The Web, SMTP/POP email, SMS, FTP, UseNet, are all subsets of the actual network of dissimilar, yet connected by common protocols, networks that form the larger Internet.

> Noun World Wide Web
> The World Wide Web is a system of extensively interlinked hypertext documents: a branch of the Internet. https://www.dictionary.com

I previously identified the **seven** most frequent sites I currently visit as examples. SamKnows tests to far more and much deeper than this, most of which I do not care about.
How about you **point your probe traffic gun** at this site, as I have, which has a combined 2000 Gbps Tier 1 backbone connection and is in the neighborhood of your Charter Denver datacenter?
This seems like a reasonable ask.

Regarding the spreadsheet:
This is simply an updated version of the same data dump as before in a different format. It really does not tell me anything, other than your bandwidth to these two servers.
However, I do remain curious how you generate this flood of 1000Mbps probe traffic to mostly saturate these two server 1Gbps connections.

"The issue was initially presented was related to not getting the speeds delivered that we promise, however that appears to have evolved into less of a local speed issue and more of an overall issue with performance your service once it leaves our network."

It has _*never*_ been about a *local* speed issue! Quite the contrary. Internet connections by their very nature are not local.
For more than three years, I have been searching for an adequate test methodology to prove Spectrum correct in their advertising, and justified in their billing to me. I have gone to great length in time and expense to eliminate all hardware and software variables that would interfere with the accuracy of my quest.
I have yet to fully accomplish this, but have come close with Testmy.net, fast.com, and fiber.google.com/speedtest, which btw will give me a 2/1 Gbps connection for the same $100 I am paying to you.
Or an 8/8 Gbps connection for $150.
All of these speed tests show substandard performance of my Internet connection, and as a result incorrect billing.

I did have some hope, now dashed, that you would follow the same testing protocols that SamKnows worked out with the FCC.
However you only seem to want to manipulate the testing in such a way as to turn a negative into a positive.
Going back to 2021, I have never been accepting of your local SPECTRUMNET speeds as being reflective of my INTERnet performance.
In addition to that, since my upgrade to 1000Mbps, even my local tests to your Eau Claire test site have been random and erratic and consistently below the 1000Mbps service you bill me for.
"we use on-net servers as that is the portion of our network we have control over; however we still test to the off-net servers for comparison."

This whole concept baffles me. Only a monopolistic corporation could draw, or in this case invent, this distinction without a difference.
Again, you are simply a middleman, a reseller of an overpriced product. The pipeline network that you manage is filled by your purchase of Mbps from a tier one provider. The performance of your network and its interconnection to the larger network are controlled by YOU from my router at the very least to the IXP transit point on the Internet backbone. Your peering and transit agreements also govern my resultant service.

"the point you made was referring to Quality of Experience tests, which are different than a standard speed test. SamKnows does allow for video conferencing, gaming, social media, and streaming service tests, however the US FCC does not currently report on these for the yearly FCC MBA program."

Again, a distinction without a difference. Self-reportable or not, the FCC should not be your primary concern. Me, the customer should be.
I suspect that the FTC and the DATCP are interested in the ***bait and switch*** involved in selling SPECTRUMNET as INTERnet.
Let me refresh your memory:
The Internet is a vast computer network linking smaller computer networks worldwide. The Internet includes commercial, educational, governmental, and other networks, all of which use the same set of communications protocols. (i.e. TCP/IP) https://www.dictionary.com
I do not recognize or acknowledge a difference between testing "On-Net" and "Off-Net". Your own Spectrum network is of course your concern but not mine, unless it impacts me.
My concern is the Mbps delivered to my home in real terms not from some out of the way geographically near speed test server. What is delivered from your WAN network to my TDI LAN network, is my concern.
I have clearly identified, with supporting evidence, that your recommended speedtest.net sites are clearly a marketing device for your company and nothing more significant than that.

> Noun Charter
> The first records of the term charter come from the 1200s. It ultimately comes from the Latin chartula, meaning "little paper." Charters are important parts of history, and the business world because they explicitly describe the formation of, and values that have influence over a large number of people.
> Noun spectrum
> Physics.
> A broad range of varied but related objects, the individual features of which tend to overlap so as to form a continuous series. https:/www.dictionary.com

This seems like the definition of an internetwork of networks to me.
I will leave you with a question as well. Any thoughts on why my test results above are so poor?
Lefty

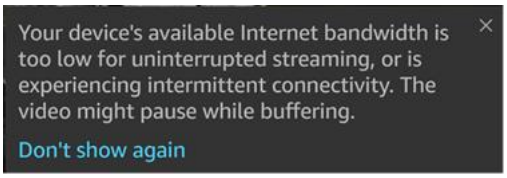
From: Spectrum OP VP [mailto: VP@charter.com]
Sent: Saturday, June 17, 2023 4:38 PM
To: Lefty Insider <lefty@tcw.org>
Subject: Automatic reply: [EXTERNAL] SamKnows speed testing
I am on vacation and will respond to your email when I return.

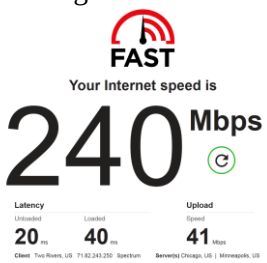
Yeah, I could use a vacation from this shit too!

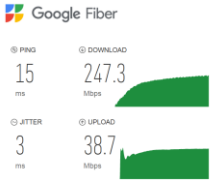
From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Sunday, June 18, 2023 11:22 AM
To: 'Spectrum OP VP' <VPOP@charter.com>; 'Senior VP' <SVP@charter.com>; spectrumchatsupportengineers@charter.com
Cc: datcphotline@wisconsin.gov; aaron.romens@wisconsin.gov; antitrust@ftc.gov; 'FCC' <consumercomplaints@fcc.gov>
Subject: Numbers that add up to nothing

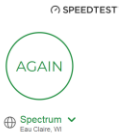
"t1.st.chi10.tbone.rr.com Mean Average 931 /38.9 Mbps
n1-fcc-chicago-us.samknows.com Mean Average 919/ 38.8 Mbps

Is it just me or are these numbers on the Excel spreadsheet you previously sent, *meaningless* if I keep getting these messages about insufficient bandwidth?
I have no doubt that you can manipulate your routing tables to achieve the above results.









VP,
So I am watching "Air" on HBO Max shortly before 9 PM last night and part way in to the movie the screen freezes and Amazon gives me a low bandwidth message. It later clears.
This is a Win10 PC with a wireless 802.11 AX card connection and is the only thing running in the house at this time, forty feet line-of-sight from the Netgear Nighthawk Wi-Fi 6 gaming router.
A wireless speed test from this PC shows me at 140 Mbps on your SPECTRUMNET to your Eau Claire speedtest.net test server.
No other testing was being done during the movie. Prime only needs 2-4 Mbps for an HD movie and you can't even give me those? How is this even possible?

This situation reminds me of an experience I had. In the late 1980's I bought a house in Racine with a TV antenna on the roof.

Wanting more channels, as we were accustomed to in our previous location in the Chicago far west suburbs, I called the cable company, in this case Racine TeleCable which later became Time Warner Cable or TWC.

The tech came out to install it, and when he turned the TV on there was this snowy and fuzzy picture on the TV on most all of the channels.

I flipped the A/B switch over to the antenna and showed him the same channels coming off the antenna being crystal clear.

I will always remember him saying "we can't compete with that" So for twenty bucks a month, (a satellite dish, a bunch of electronics, and miles of cable) or whatever it was back then, they could not compete with a free over the air signal.

This reason I am telling you this is that it seems that this moronic mantra, "there is nothing we can do" seems to have come over in your purchase of TWC and infested Spectrum as well.

Lefty

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Monday, June 19, 2023 12:01 PM
To: 'Spectrum OP VP' <VPOP@charter.com>; 'Senior VP' <SVP@charter.com>
Cc: datcphotline@wisconsin.gov; 'Kolb, Brian J - DATCP' <Brian.Kolb@wisconsin.gov>; antitrust@ftc.gov; aaron.romens@wisconsin.gov; 'FCC' <consumercomplaints@fcc.gov>; spectrumchatsupportengineers@charter.com
Subject: What three speed test sites look like!

VP,
Some additional info that will hopefully inform your analysis and lead to a correction of my continuing speed issues.
Lefty

Testmy.net 104.26.5.115

Tracing route to 104.26.5.115 over a maximum of 30 hops

1	<1 ms	<1 ms	<1 ms	192.168.1.1
2	*	*	*	Request timed out.
3	13 ms	14 ms	14 ms	lag-63-10.dtr01twrvwi.netops.charter.com [96.34.23.212]
4	22 ms	23 ms	19 ms	lag-204.crr01stptwi.netops.charter.com [96.34.30.25]
5	21 ms	16 ms	25 ms	lag-400.crr01euclwi.netops.charter.com [96.34.24.83]
6	58 ms	19 ms	26 ms	lag-100.bbr01euclwi.netops.charter.com [96.34.2.153]
7	27 ms	23 ms	23 ms	lag-5.bbr02euclwi.netops.charter.com [96.34.0.7]
8	44 ms	39 ms	38 ms	lag-1.bbr01chcgil.netops.charter.com [96.34.0.9]
9	30 ms	31 ms	31 ms	lag-811.prr01chcgil.netops.charter.com [96.34.3.119]
10	*	*	*	Request timed out.
11	42 ms	30 ms	38 ms	172.70.124.2
12	33 ms	31 ms	33 ms	104.26.5.115

Trace complete.

So after 9 hippy hops around Charter, it hits a Cloudflare server 172.70.124.2 before hitting the target IP which is also a Cloudflare server.

Fast.com 23.61.170.100

Tracing route to a23-61-170-100.deploy.static.akamaitechnologies.com [23.61.170.100]
over a maximum of 30 hops:

1	<1 ms	<1 ms	<1 ms	192.168.1.1
2	*	*	*	Request timed out.
3	16 ms	14 ms	16 ms	lag-63-10.dtr01twrvwi.netops.charter.com [96.34.23.212]
4	17 ms	14 ms	15 ms	lag-204.crr01stptwi.netops.charter.com [96.34.30.25]
5	19 ms	18 ms	19 ms	lag-400.crr01euclwi.netops.charter.com [96.34.24.83]
6	*	16 ms	15 ms	lag-101.bbr01euclwi.netops.charter.com [96.34.1.20]
7	22 ms	23 ms	23 ms	lag-5.bbr02euclwi.netops.charter.com [96.34.0.7]
8	31 ms	39 ms	39 ms	lag-1.bbr01chcgil.netops.charter.com [96.34.0.9]
9	34 ms	34 ms	37 ms	lag-803.prr02chcgil.netops.charter.com [96.34.3.114]
10	33 ms	31 ms	30 ms	096-034-152-107.biz.spectrum.com [96.34.152.107]
11	*	*	*	Request timed out.
12	*	*	*	Request timed out.
13	*	*	*	Request timed out.
14	31 ms	34 ms	35 ms	a23-61-170-100.deploy.static.akamaitechnologies.com [23.61.170.100]

Trace complete.

So 10 hops around Charter ending at an Akamai server.

Fiber.google.com/speedtest 142.250.191.142

Tracing route to ord38s29-in-f14.1e100.net [142.250.191.142]
over a maximum of 30 hops:

1	1 ms	<1 ms	<1 ms	192.168.1.1
2	*	*	*	Request timed out.
3	17 ms	18 ms	10 ms	lag-63-10.dtr01twrvwi.netops.charter.com [96.34.23.212]
4	20 ms	18 ms	18 ms	lag-204.crr01stptwi.netops.charter.com [96.34.30.25]
5	16 ms	25 ms	25 ms	lag-400.crr01euclwi.netops.charter.com [96.34.24.83]
6	21 ms	24 ms	23 ms	lag-101.bbr01euclwi.netops.charter.com [96.34.1.20]
7	25 ms	15 ms	24 ms	lag-5.bbr02euclwi.netops.charter.com [96.34.0.7]
8	37 ms	31 ms	39 ms	lag-1.bbr01chcgil.netops.charter.com [96.34.0.9]
9	34 ms	32 ms	34 ms	lag-801.prr01chcgil.netops.charter.com [96.34.3.9]
10	33 ms	30 ms	37 ms	096-034-152-159.biz.spectrum.com [96.34.152.159]
11	32 ms	39 ms	34 ms	74.125.251.149
12	33 ms	29 ms	31 ms	142.251.60.7
13	32 ms	37 ms	33 ms	ord38s29-in-f14.1e100.net [142.250.191.142]

Trace complete.

So another 10 hops around Charter and then on to a trio of Google servers.

Maybe you cannot get enough transit or peering capacity, or maybe you just do not want to pay for it.
I know that 40 Gbps transit can cost $2000 or more per month. Cost of doing business?
Maybe you are traffic shaping at a core router or a server with QOS profiles.
There has a be a reason(s) why the Spectrum performance is so substandard at these speed test sites.

Here is a repeat of some info I shared two years ago:

The true worth of an ISP

In our opinion, the true value of an Internet service provider, ISP, is not always measured in megabits. Truly great providers maintain good peering relationships with other providers so their users sustain quality speeds throughout the Internet, not just nearby.

What good is an Internet connection if you can only get your advertised speeds on your provider's internal network (or on the edge of their network)?

It is the INTERnet not INTRAnet, that you are paying them monthly for. If you run a speed test elsewhere and get higher results than you get here, poor provider peering may be to blame. **https://testmy.net/legit-speed-test.php**

So the total amount of bandwidth an ISP has to sell is the sum of the bandwidth it's able to deliver to and from all IXPs combined, less any inefficiencies due to lack of interconnections (peering) at those IXPs, plus a little bit because occasionally the ISP's own customers will want to talk to each other, and that traffic doesn't need to go to an IXP and back. Speed x distance = cost.

https://www.quora.com/How-ISPs-determine-speed-for-the-users-What-is-the-total-Internet-speed-an-ISP-has-and-according-to-what-it-gets-divided-to-users?share=1

Peering Agreements

Peering provides a more direct traffic path between the parties while reducing the load on these expensive transit services. Since peering is a nontransitive relationship, Internet Peering is not a perfect substitute for Internet Transit.

Internet Transit is a service that provides access to the global Internet, while Internet Peering simply provides a more direct path for a subset of the traffic.

Internet Peering is typically settlement-free, with each side deriving about the same value from the reciprocal arrangement. If either party perceives that the benefit derived from peering is asymmetric, one party or the other may deny peering or suggest an alternative paid arrangement.

If the cost of exchanging traffic in peering relationships is less than the cost of sending that traffic through a transit service, then peering can be a financially rational decision. Peering makes sense when it is cheaper to send traffic to peers than though a transit provider. *This is also, where the quality of the service provided (QOS) could degrade due to cost concerns and prioritization of convenience over performance.*

Transit usually provides a more circuitous path than peering – a path through potentially many networks.

However, the primary motivation for these ISPs is to own the home market and not make it easy for other ISP's to build in to their home market and compete with them.

The cost of peering at an IXP usually involves: Transport fees (unmetered) for getting the traffic to the exchange point (IXP), Colocation fees, Equipment expenses plus the Peering port fees on the exchange point shared fabric.

References: *The 2014 Internet Peering Playbook: Connecting to the Core of the Internet © 2014 by William B. Norton and published by DrPeering Press*

https://www.ctstelecom.com/the-three-tiers-of-isps-what-they-mean-why-theyre-important/

https://drpeering.net/FAQ/Who-are-the-Tier-1-ISPs.php

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Tuesday, June 20, 2023 9:43 AM
To: 'Spectrum OP VP' <VPOP@charter.com>; 'Senior VP' <SVP@charter.com>
Cc: datcphotline@wisconsin.gov; 'Kolb, Brian J - DATCP' <Brian.Kolb@wisconsin.gov>; aaron.romens@wisconsin.gov; 'FCC' <consumercomplaints@fcc.gov>; antitrust@ftc.gov; spectrumchatsupportengineers@charter.com
Subject: Poor results with random precision

VP,

You: "At some point we will need to agree to disagree that we have an obligation to ensure Internet speed performance across the entirety of the world wide web"

Me: "I previously identified the seven most frequent sites I visit as examples."

So if not these seven sites, where can I go to from your network and get what I am paying for?
You seem to have definitively ruled out Netflix, Amazon Prime Video, YouTube, various podcasts, or any speed test site that you don't control.

Ok, I'll start, but I have no need for anything more than 100Mbps at any of these sites.

1. Spectrum.com
2. Spectrum.net
3. t1.st.chi10.tbone.rr.com
4. n1-fcc-chicago-us.samknows.com

Speed test sites, "*servers close to you"*: (although my test results are consistently, yet randomly, below 1000Mbp to all of these sites)

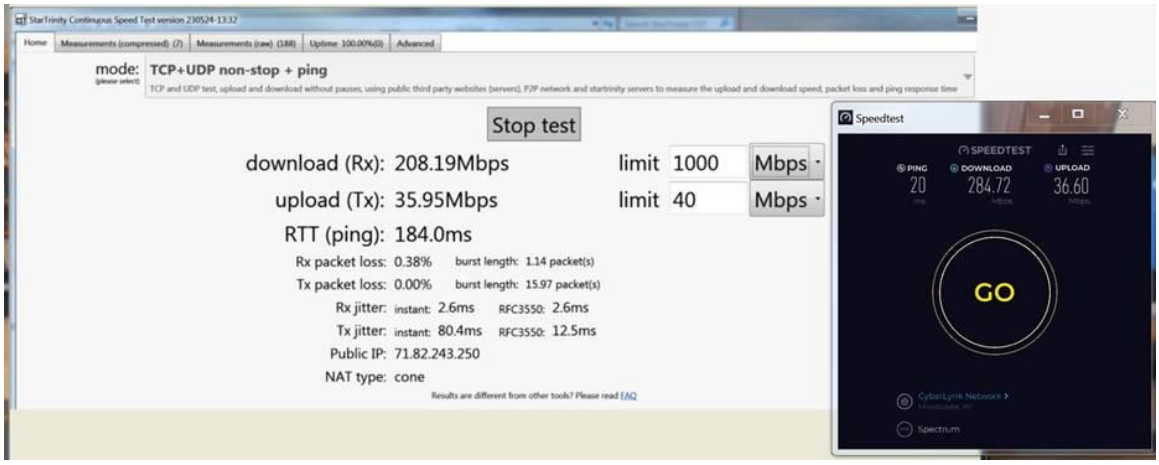
1. Milwaukee, WI CyberLynk Network
2. Milwaukee, WI Ethoplex, LLC
3. Allendale, MI Spectrum
4. Milwaukee, WI Netwurx LLC
5. Random Lake, WI Bertram Communications
6. Green Bay, WI Nsight
7. Traverse C
8. Allendale, MI AcenTek
9. White Cloud, MI Truestream
10. Oxford, WI Marquette-Adams Telephone Cooperative

Anywhere else?
You act like a governor on a 500 horsepower engine, that won't allow me to reach the speed limit.
Or do you just increase the advertised speed as a marketing gimmick to justify the ever increasing and uncompetitive pricing?
Lefty

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Tuesday, June 20, 2023 3:05 PM
To: 'Spectrum OP VP' <VPOP@charter.com>; 'Senior VP' <SVP@charter.com>
Cc: datcphotline@wisconsin.gov; 'Kolb, Brian J - DATCP' <Brian.Kolb@wisconsin.gov>; aaron.romens@wisconsin.gov; 'FCC' <consumercomplaints@fcc.gov>; antitrust@ftc.gov; spectrumchatsupportengineers@charter.com
Subject: SPECTRUMNET overlaid over INTERnet Part One
VP,
This example graphic pretty much illustrates and summarizes my situation to this point.
It's unfortunate for _*me*_ and most of the residents of NE Wisconsin, that you don't advertise and bill based on the SPECTRUMNET service you are actually providing.
How about my proposal for .10 per megabit for local service (SPECTRUMNET) and .5 per megabit for long distance (Internet)? Price to be based on QoS and QoE to the customer.
This SamKnows testing data already being collected could provide the necessary billing metadata.
Lefty

SPECTRUMNET overlaid over INTERnet

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Wednesday, June 21, 2023 8:58 AM
To: 'Spectrum OP VP' <VPOP@charter.com>; 'Senior VP' <SVP@charter.com>
Cc: datcphotline@wisconsin.gov; 'Kolb, Brian J - DATCP' <Brian.Kolb@wisconsin.gov>; aaron.romens@wisconsin.gov; 'FCC' <consumercomplaints@fcc.gov>; antitrust@ftc.gov; spectrumchatsupportengineers@charter.com
Subject: SPECTRUMNET overlaid over INTERnet Part Two
VP,
This example graphic continues to illustrate and summarize my concerns to this point.
Lefty



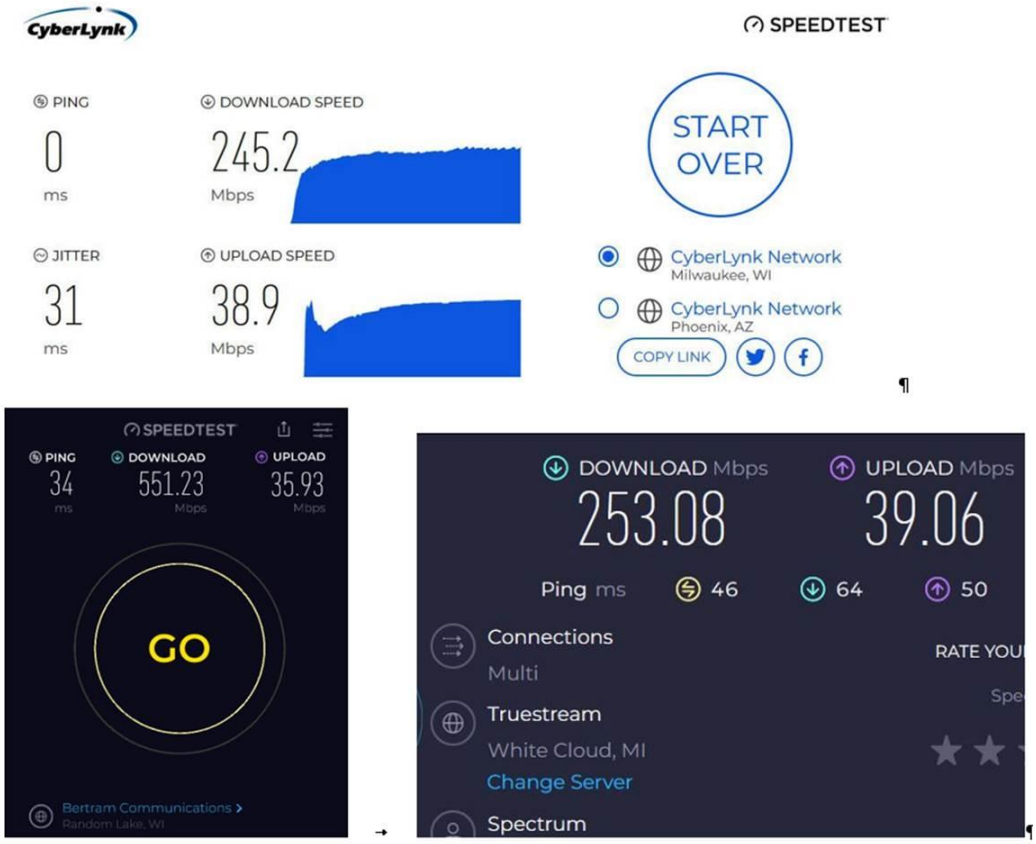
http://startrinity.com/InternetQuality/ContinuousSpeedTesterFAQ.aspx

These tests go to places around the world, but one of these tests goes to 205.93.210.35 which is registered to the Navy Network Information Center (NNIC) VIRGINIA BEACH, VA
Speedtest.net sample taken with the default server location, and not the Eau Claire server you insistently recommend and seem to have optimized in some way.
And then there is this:

Our 16,000 plus robust network of servers enables us to ensure that our users get local readings wherever they are on the planet.
Here is what Ookla offers ISP's:

- *Give your users the best Speedtest results by having a **local server** that shows how good your service truly is.*
- *Keep Speedtest traffic on your **local network** so your data throughput is as low and as clean as possible.* https://www.ookla.com/network

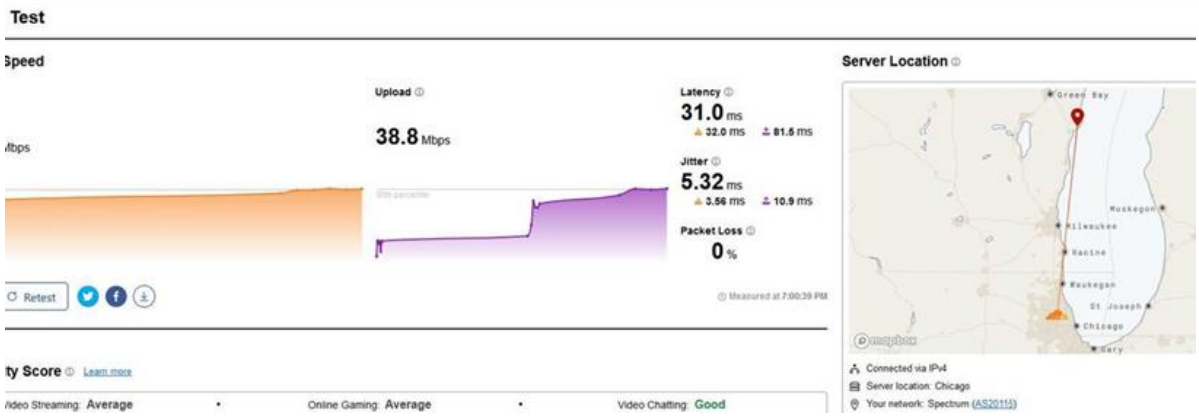
From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Thursday, June 22, 2023 8:06 AM
To: 'Spectrum OP VP' <VPOP@charter.com>; 'Senior VP' <SVP@charter.com>
Cc: datcphotline@wisconsin.gov; 'Kolb, Brian J - DATCP' <Brian.Kolb@wisconsin.gov>; aaron.romens@wisconsin.gov; 'FCC' <consumercomplaints@fcc.gov>; antitrust@ftc.gov; spectrumchatsupportengineers@charter.com
Subject: SPECTRUMNET overlaid over INTERnet Part Three
VP,
This example graphic continues to illustrate and summarize my objections to your service to this point.
Lefty
This background speed test is from my webserver ISP who hosts a minimum (actuals are trade secrets never disclosed) of a 10-200 Gbps backbone from six Milwaukee area bandwidth providers.
https://www.hostingsupport.io



These speedtest.net results are on the left the site which was preferred (insisted on) site of the six Spectrum technicians who visited my home for testing in 2021.
On the right is the speed test from the default test server on another of my computers. The default server can vary among several choices.

Note: Each of my ten computers will provide a different default test sever based on some random unknown allocation.

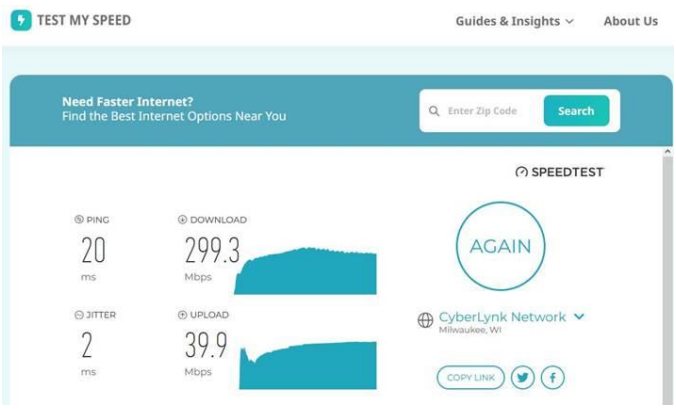
From: Lefty Insider [lefty@tcw.org]
Sent: Thursday, June 22, 2023 3:15 PM
To: 'Spectrum OP VP' <VPOP@charter.com>; 'Senior VP' <SVP@charter.com>
Cc: datcphotline@wisconsin.gov; 'Kolb, Brian J - DATCP' <Brian.Kolb@wisconsin.gov>; aaron.romens@wisconsin.gov; 'FCC' <consumercomplaints@fcc.gov>; antitrust@ftc.gov; spectrumchatsupportengineers@charter.com
Subject: SPECTRUMNET overlaid over INTERnet Part Four
VP,
I thought there would only be three parts to this, but I could not resist this one more to fully interject and expand my evidence.
Not unlike "Where's Waldo", where can I get my advertised and billed speed?
Where is it hiding?
Lefty



https://speed.cloudflare.com/ Sever in Chicago, but not _*your*_ Chicago server.

"Cloudflare is a global network designed to make everything you connect to the Internet secure, private, fast, and reliable."

Hmmm!



TestMySpeed is based in Denver, CO
https://www.testmyspeed.com/

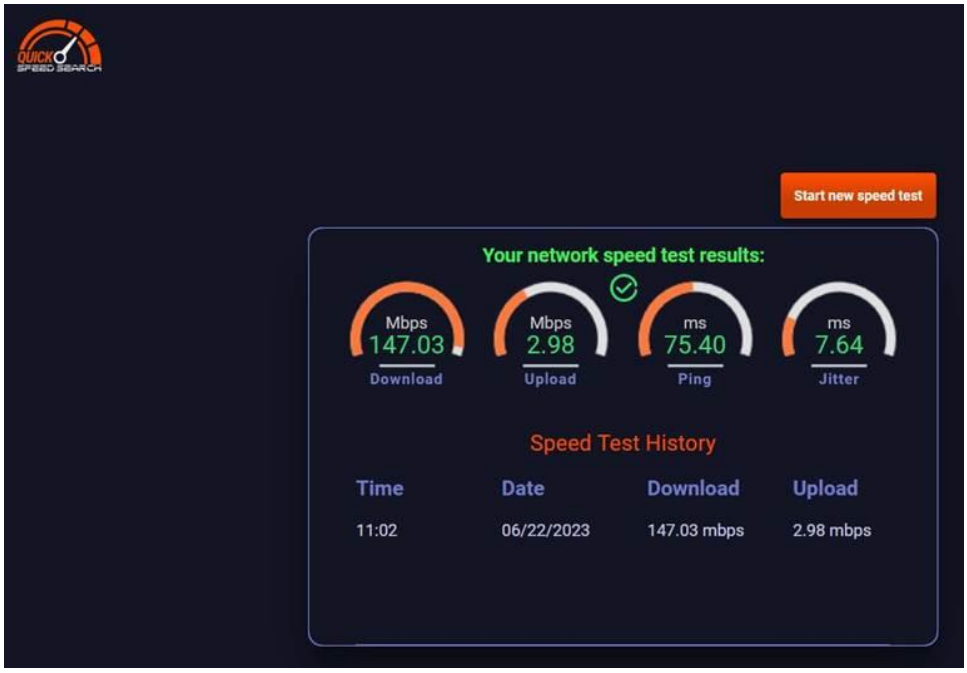
"TestMySpeed is the best way to assess your internet connection in real-time. It provides the most accurate results on the quality of your service when you need it the most."

Setting the Standard
What was once a nice-to-have is now a must-have. From education to trade, the internet touches nearly every aspect of our lives in one way or another. Yet, speed and reliability vary wildly from provider to provider, and even house to house. We're on a mission to improve the overall quality of internet service by delivering accurate results people can use to compare to one another.
We hope our TestMySpeed results empower you to hold your internet service providers accountable to the speeds you pay for, leading to a better internet experience for you and other customers they serve.

Accurate Testing
Many of us don't get what we pay for, and a speed test is a great way to know for sure. Our TestMySpeed tool uses the latest technology to provide accurate testing no matter what device you're on or where you are located. Test your internet service from anywhere in the world to better understand your connection when you need it the most.

Transparent Results
TestMySpeed provides unbiased and transparent results to help you assess the real quality of your internet connection no matter where you are in the world. Use your speed results to see how your internet service stacks up to other users and providers near you. TestMySpeed may be able to help you get to the bottom of what's really causing your internet issues.

Expert Advice
Our internet experts are working behind the scenes to create helpful resources for all your internet concerns. Running a speed test helps you pinpoint what's wrong with your internet connection. The next step is figuring out why it's happening. Use our insights to learn how to read your network speed test as well as what can cause slow internet.



Yet another bad result at Yahoo speedtest.

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Friday, June 23, 2023 8:43 AM
To: 'Spectrum OP VP' <VPOP@charter.com>; 'Senior VP' <SVP@charter.com>; ExecVP@charter.com; COO@charter.com; CTO@charter.com; ExecVP-NetOps@charter.com
Cc: datcphotline@wisconsin.gov; spectrumchatsupportengineers@charter.com; 'FCC' <consumercomplaints@fcc.gov>; antitrust@ftc.gov; 'Kolb, Brian J - DATCP' <Brian.Kolb@wisconsin.gov>; aaron.romens@wisconsin.gov
Subject: Pay for only what you get?
Vice President Operations, Charter Communications
Madison, WI
In my lifetime the Internet (ARPANET/NSFNET) has evolved from a research and communication tool for university researchers and for government defense purposes, (who initially funded the creation and expansion of this network via ARPA and the NSF), and then from a curiosity to an essential tool of commerce, entertainment, and communication for the general population. Now it has further evolved to an essential and necessary 21st Century utility.

- Municipal water is metered and billed per gallon. Sewer charges are based on water usage.
- Electricity is metered and billed by multiplying the average monthly consumption in kWh by the current rate per kWh.
- Natural gas is metered and billed per cubic feet in units of 100 cubic feet (1 ccf)
- We buy gasoline, propane, and diesel based on metered gallons or liters
- Electricity for electric cars is metered and billed at kWh's.
- We buy our packaged food based on ounces or pounds
- We buy our bottled drinks (soda, milk, water) based on ounces, gallons, or liters

Unlike these other utilities however, you at Spectrum don't actually make or produce anything. It does not cost you anything to produce megabits.
You are a reseller, a middleman who overcharges for the megabits you buy from someone else!
You then just transport and sell them. You are in the pipeline business not the product production or manufacturing business.
Yet we all within your noncompetitive territorial boundaries buy Internet based from you based on misleading ads, and the promises contained within. We have few or no other good choices.
Would you be Ok with getting your portion of natural gas or electricity based on the current variable network capacity rather than price per unit?
Can you think of anything else that we buy in an actual unknown (unsubstantiated) quantity based on a promise?
Why isn't Internet service metered (logged) and why can't Internet service be charged per megabit actually delivered?
I am currently paying .10 per megabit ($100 p/mo. for 1000 Mbps down and 40 Mbps up).
What am I actually getting? See actual graph data below.
How about pay for only what you get?
Since the SamKnows data collection software, https://samknows.com already exists in millions of ISP provided routers in people's homes, without their knowledge nor access to the data that it collects, the FCC/FTC/ CFPB could simply mandate customer access to this data. Customers could compare this data to their bill, in the same manner that they can compare their online utility bills to their home mounted meters.

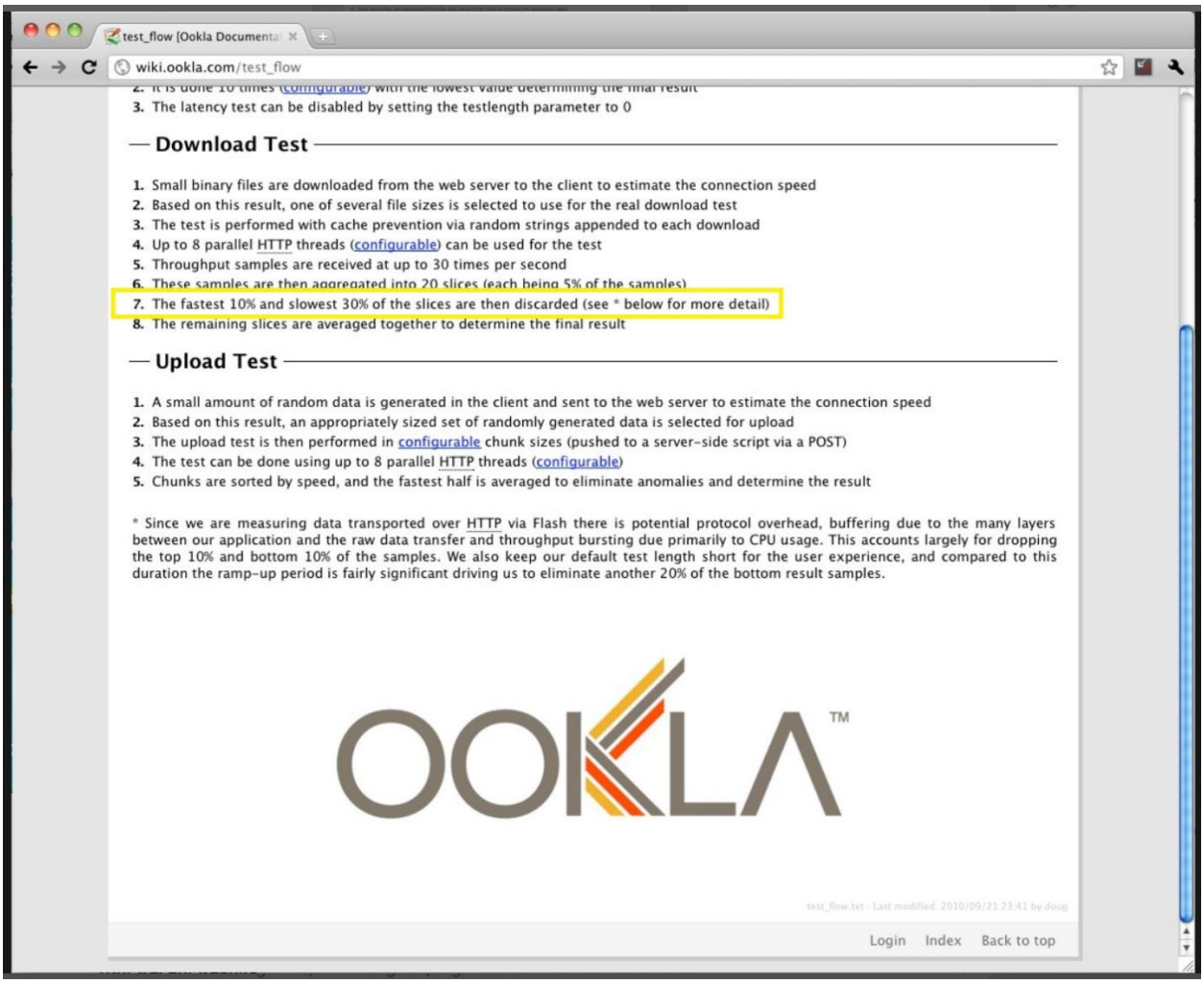
Those who use their own modem/routers, rather than the one Spectrum supplies, could simply opt into the program, download the software as a router firmware upgrade, to be able to view their data.
Since most consumers have only one or two choices for ISP's, this would be relatively easy to accomplish.
Future Federal funding, aka corporate welfare, could be contingent on their QoS/QoE provision of service, holding these companies accountable to their customers for the very first time in history.
Internet speed testing is a dubious activity, fraught with peril and disinformation as I know full well having run close to 2000 tests over the past several years.
Speedtest.net is obviously compromised to suit the needs of Internet monopoly marketing claims. Results can be easily "tuned" by ISP's to meet their needs.

If you will allow me the discretion to misquote one of my former favorite writers:

"The Internet Provider business is a cruel and shallow money trench, a long plastic hallway where thieves and pimps run free, and good men die like dogs. There's also a negative side." Hunter S. Thompson

According to the Ookla Wiki, the fastest 10% and slowest 30% of your results are DISCARDED with speedtest.net. The remaining data is averaged together to determine the final result.
Ookla speed tests are also multithreaded, meaning that they open more than one connection to the host and combine the speeds, as do web browsers. This often can mask congestion issues, making your connection look better than it really is.

This website no longer exists except in the WayBackMachine:
https://web.archive.org/web/20230000000000*/https://wiki.ookla.com/
It seems to have been taken down now but was Saved **77 times** between April 4, 2009 and July 4, 2019.
I wonder who made them take it down?
You can find the graphic below at:
https://web.archive.org/web/20110715182001/http://wiki.ookla.com/test_flow



Allow me to provide an analogy to further understanding.

From a former mechanic's point of view, using speedtest.net is like putting a voltmeter on a battery seeing 12 volts of surface voltage and pronouncing it good. This is what phones and other wireless devices do especially the newer ones with multiple radio antennas.
The real test of a battery or an Internet connection is to put a load against it. Only a load tester for a battery can put a partial discharge against it, or a computer to put a sufficient packet download against it, can provide a true test.

Fast.com which measures Netflix performance is dismissed by Spectrum as you claim not to have control over the third party caching servers (Akamai, Cloudflare, etc.) where this performance is measured.
My results on various fiber quality testing services such as Google all show substandard performance from your network as the test results sent previously to you clearly outline.
The testmy.net results shown below indicate the most accurate tests that I have been able to discover to this point. Note that Multithread is ON for these tests perhaps making them look better than they really are. Benefit of the doubt here.

Testmy.net has multi-homed connectivity and bandwidth from over 25 independent Tier 1 carriers including Comcast, Cox, Time Warner, Charter, Qwest, Google, Level 3, Internap, NTT America, Equinix & Telefónica to name a few. The network has a total capacity of over 2000 Gbps and their servers have multiple gigabit uplinks into that network. TestMy is always overstocked with bandwidth and can meet the needs of even the most demanding connections. So whether it's Fiber, Cable, DSL, Mobile Broadband, Satellite or Dial-up TestMy will output accurate, reliable speed test results.

The graph data below shows my _*actual*_ Mbps received and sent on a consistent basis over a long term. Despite these tests being sent to a specialized test sever in Colorado Springs, CO, at a test facility with a 2000 Gbps backbone capacity, both upload and download are well below the Spectrum advertised (promised) 1000/40 Mbps speeds.

Testing as shown above for 10 straight days running every hour or so randomly. These more than 400 unique combined U/D tests involve sending a 20MB upload traffic probe and receiving a 200BMB download. I will continue to run these tests for another 30 days, but I don't expect the results to widely differ.
So back in 2021 when I upgraded to 400 Mbps, I was getting 200-250 somewhat consistently on my long term tests.
Now in 2023 after upgrading to 1000 Mbps, I am getting 300-500 fairly consistently on my long term tests.
Short term speed tests on a wide range of test sites reflect far lower results.
I want to pay for only what I am getting, not what you advertise.

The FTC does require substantiation of all advertising claims. See attached pdf and links below.
https://www.ftc.gov/legal-library/browse/ftc-policy-statement-regarding-advertising-substantiation
https://content.next.westlaw.com/practical-law/document/Iffc05c09d69011e698dc8b09b4f043e0/Staking-a-Claim-The-Basics-of-FTC-Claim-Substantiation?transitionType=Default&contextData=%28sc.Default%29&viewType=FullText

http://www.tcw.org/Substantiation.pdf

The Federal Trade Commission (FTC) requires advertisers to provide a reasonable basis for advertising and marketing claims. The process of demonstrating that reasonable basis is called claim substantiation.

ChatGPT 3.5

Yes, you are correct. The Federal Trade Commission (FTC) requires advertisers to have a reasonable basis for the claims they make in their advertising and marketing materials. This process of demonstrating a reasonable basis is known as claim substantiation.

Claim substantiation refers to the evidence and supporting data that advertisers must possess to support the claims they make about their products or services. Advertisers are responsible for ensuring that their claims are truthful, accurate, and backed by sufficient evidence.

The specific requirements for claim substantiation can vary depending on the nature of the product or service being advertised. Advertisers must use reliable and competent scientific evidence or other forms of reliable evidence to support their claims. The FTC may consider factors such as the type of claim, the product category, the level of evidence needed, and the experts' qualifications, among other things.

If an advertiser fails to substantiate its claims adequately, the FTC can take enforcement action, including issuing warnings, imposing fines, or filing lawsuits to protect consumers from deceptive or misleading advertising practices.

It's important for advertisers to understand and comply with the FTC's guidelines on claim substantiation to ensure that their advertising and marketing materials are accurate, truthful, and in compliance with the law.

About the Author

My very first online connection, circa 1988, was with a 2400bps dialup connection to the ExecPC Bulletin Board System or BBS, in Milwaukee and eventually to CompuServe via Racine, Milwaukee, and Chicago modem numbers. I went at significant expense, wherever the modem speeds were fastest. My very first Internet connection circa 1992 was a 9600bps dial-up connection via an 800 phone number to an ISP called Spry in Seattle and later via CompuServe. My second Internet connection was with the Microsoft Network (MSN) with a free account as a Windows 95 beta tester via 64/128kbps ISDN circa 1995. My third Internet connection was with Wisconsin Bell with a 256kbps DSL connection circa 1998.

I created and ran a 400-customer 56k dialup (with a Broadband Wireless backhaul) Internet Service Provider or ISP called BridgeNet in Racine, I also designed and built a Wireless Broadband Internet Service Provider or WISP in Racine. I have also connected to the Internet over the years with Broadband Wireless (both urban and rural), T1's, 128-512Kbps DSL, and over time via advertised 30-400Mbps cable connections. (10 to 100Mbps actual)

I began beta testing versions of the MS Windows software, beginning with the multimedia extensions and Video for Windows 3.1, (1992) and then later with Windows 95, 98, Windows XP, Vista, and Windows 7, 8, and finally Windows 10. (2014)

I operated a SE Wisconsin Tri-County for profit business as President/CEO, involved in the manufacture, sale, integration, and support of many hundreds of custom built business client and server computer systems. This includes the integration and support of hundreds of OEM laptop and tablet computers, printers, networking gear as well as client and server software products.

I also linked multiple customer remote offices to centralized databases via VPN's across Internet connections.

I also built integrated, and supported dozens of specially adapted voice, and modified head, and hand control computer systems for the disabled as a sideline business.

I was also the founding Executive Director of Tech Corps Wisconsin, Inc. a statewide non-profit volunteer agency dedicated to helping provide children with computer and Internet technology access. Our volunteer operated organization refurbished and delivered many, many, thousands of these computer systems to schools of all types, non-profit organizations, and low income families. I founded and managed these two businesses for more than two decades.

I retired from active work to write novels in 2014, but remain active in monitoring and writing about current technology trends and personally deploying computer technologies in my personal ten computer network.

The email above was also forwarded and copied as below.

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Monday, June 26, 2023 11:03 AM
To: Josh.Kaul@doj.state.wi.us; ag@doj.state.wi.us; josh.kaul@wisconsin.gov; dojcommunications@doj.state.wi.us
Cc: 'Rep.Tittl' <Rep.Tittl@legis.wisconsin.gov>; rep.anderson@legis.wisconson.gov; rep.august@legis.wisconsin.gov; rep.ballweg@legis.wisconsin.gov; rep.barca@legis.wisconsin.gov; rep.berceau@legis.wisconsin.gov; rep.bernier@legis.wisconsin.gov; rep.billings@legis.wisconsin.gov; rep.born@legis.wisconsin.gov; rep.bowen@legis.wisconsin.gov; rep.brandtjen@legis.wisconsin.gov; rep.brooks@legis.wisconsin.gov; rep.rob.brooks@legis.wisconsin.gov; rep.brostoff@legis.wisconsin.gov; rep.considine@legis.wisconsin.gov; rep.crowley@legis.wisconsin.gov; rep.doyle@legis.wisconsin.gov; rep.duchow@legis.wisconsin.gov; rep.edming@legis.wisconsin.gov; rep.felzkowski@legis.wisconsin.gov; rep.fields@legis.wisconsin.gov; rep.genrich@legis.wisconsin.gov; rep.goyke@legis.wisconsin.gov; rep.gundrum@legis.wisconsin.gov; rep.hebl@legis.wisconsin.gov; rep.hesselbein@legis.wisconsin.gov; rep.horlacher@legis.wisconsin.gov; rep.hutton@legis.wisconsin.gov; rep.jacque@legis.wisconsin.gov; rep.jagler@legis.wisconsin.gov; rep.jarchow@legis.wisconsin.gov; rep.katsma@legis.wisconsin.gov; rep.kerkman@legis.wisconsin.gov; rep.kessler@legis.wisconsin.gov; rep.kitchens@legis.wisconsin.gov; rep.kleefisch@legis.wisconsin.gov; rep.knodl@legis.wisconsin.gov; rep.kolste@legis.wisconsin.gov; rep.kooyenga@legis.wisconsin.gov; rep.kremer@legis.wisconsin.gov; rep.krug@legis.wisconsin.gov; rep.kuglitsch@legis.wisconsin.gov; rep.kulp@legis.wisconsin.gov; rep.loudenbeck@legis.wisconsin.gov; rep.macco@legis.wisconsin.gov; rep.meyers@legis.wisconsin.gov; rep.milroy@legis.wisconsin.gov; rep.murphy@legis.wisconsin.gov; rep.mursau@legis.wisconsin.gov; rep.nerison@legis.wisconsin.gov; rep.neubauer@legis.wisconsin.gov; rep.neylon@legis.wisconsin.gov; rep.novak@legis.wisconsin.gov; rep.nygren@legis.wisconsin.gov; rep.ohnstad@legis.wisconsin.gov; rep.ottj@legis.wisconsin.gov; rep.petersen@legis.wisconsin.gov; rep.petryk@legis.wisconsin.gov; rep.plumer@legis.wisconsin.gov; rep.pope@legis.wisconsin.gov; rep.pronschinske@legis.wisconsin.gov; rep.quinn@legis.wisconsin.gov; rep.riemer@legis.wisconsin.gov; rep.rodriguez@legis.wisconsin.gov; rep.rohrkaste@legis.wisconsin.gov; rep.sanfelippo@legis.wisconsin.gov; rep.sargent@legis.wisconsin.gov; rep.schraa@legis.wisconsin.gov; rep.shankland@legis.wisconsin.gov; rep.sinicki@legis.wisconsin.gov; rep.skowronski@legis.wisconsin.gov; rep.snyder@legis.wisconsin.gov; rep.spiros@legis.wisconsin.gov; rep.spreitzer@legis.wisconsin.gov; rep.stafsholt@legis.wisconsin.gov; rep.steffen@legis.wisconsin.gov; rep.steineke@legis.wisconsin.gov; rep.stuck@legis.wisconsin.gov; rep.subeck@legis.wisconsin.gov; rep.summerfield@legis.wisconsin.gov; rep.swearingen@legis.wisconsin.gov; rep.tauchen@legis.wisconsin.gov; rep.taylor@legis.wisconsin.gov; rep.thiesfeldt@legis.wisconsin.gov;

rep.tittl@legis.wisconsin.gov; rep.tranel@legis.wisconsin.gov; rep.tusler@legis.wisconsin.gov; rep.vandermeer@legis.wisconsin.gov; rep.vorpagel@legis.wisconsin.gov; rep.vos@legis.wisconsin.gov; rep.vruwink@legis.wisconsin.gov; rep.wachs@legis.wisconsin.gov; rep.weatherston@legis.wisconsin.gov; rep.wichgers@legis.wisconsin.gov; rep.youngl@legis.wisconsin.gov; rep.zamarripa@legis.wisconsin.gov; rep.zepnick@legis.wisconsin.gov; rep.zimmerman@legis.wisconsin.gov; Sen.Bewley@legis.wisconsin.gov; Rep.Hintz@legis.wisconsin.gov; sen.bewley@legis.wi.gov; sen.carpenter@legis.wisconsin.gov; sen.cowles@legis.wisconsin.gov; sen.craig@legis.wisconsin.gov; sen.darling@legis.wisconsin.gov; sen.erpenbach@legis.wisconsin.gov; sen.feyen@legis.wi.gov; sen.fitzgerald@legis.wisconsin.gov; sen.frostman@legis.wisconsin.gov; sen.hansen@legis.wisconsin.gov; sen.johnson@legis.wisconsin.gov; sen.kapenga@legis.wisconsin.gov; sen.larson@legis.wisconsin.gov; sen.lemahieu@legis.wisconsin.gov; sen.marklein@legis.wis.gov; sen.miller@legis.wisconsin.gov; sen.moulton@legis.wisconsin.gov; sen.nass@legis.wisconsin.gov; sen.olsen@legis.wisconsin.gov; sen.petrowski@legis.wisconsin.gov; sen.ringhand@legis.wi.gov; sen.risser@legis.wisconsin.gov; sen.roth@legis.wisconsin.gov; sen.schachtner@legis.wisconsin.gov; sen.shilling@legis.wisconsin.gov; sen.stroebel@legis.wisconsin.gov; sen.taylor@legis.wisconsin.gov; sen.testin@legis.wi.gov; sen.tiffany@legis.wi.gov; sen.vinehout@legis.wisconsin.gov; sen.vukmir@legis.wisconsin.gov; Sen.Wanggaard@legis.wisconsin.gov; sen.wirch@legis.wisconsin.gov;
Subject: FW: Pay for only what you get?
AG Kaul,
The following information serves to substantiate my claims of illegal behavior.
It also offers a potential remedy.
Please look into this.
Thank you.

The email above was also forwarded and copied yet again as below.

PSC,
I have previously been made aware that your distinctly expressed opinion of your responsibilities toward citizens like myself, involves the metering and billing of utilities such as water, electricity, natural gas and selected telecommunications activities.
Perhaps you will reconsider this position and inform and lobby the necessary legislators of the need to expand your regulatory horizons to include the stewarding of the utility provision of Internet service, again in an effort to protect consumers.
Allowing corporate monopoly markets to rule over consumers is one despicable thing, but allowing this commonly practiced vulture capitalism to harm citizens financially is quite another.
It is one thing to feed tax monies to and encourage corporate Internet monopolies, but quite another to legislate the banning of local governments from their own provision of Internet service to its citizens.
•Wisconsin Statute Annotated § 66.0422
Wisconsin state laws allow municipalities to own and operate broadband networks, but such networks can only be paid for by subscribers of the service, not the general population. Municipalities are required to conduct feasibility studies and hold public hearings prior to offering service, allowing telecom incumbents ample opportunity to stall broadband projects. Public entities must include phantom costs in their rates and are not able to charge rates that are lower than what incumbents charge for the same service. The state laws also prohibit municipalities from subsidizing telecom services.
https://broadbandnow.com/report/municipal-broadband-roadblocks/
https://statescoop.com/report-municipal-broadband-environment-has-gotten-significantly-worse/
https://statescoop.com/more-than-20-states-still-restrict-municipal-broadband/
This consumer protection is in reality is one of the primary responsibilities of government, and the raison d'etre for your taxpayer provided drawn wages.

As you readily proclaim that you _are_ in fact responsible for the decimation of Federal funds, aka corporate welfare, as outlined directly below, perhaps it would be in the citizens interest for you to ensure that this funding is not yet again squandered as has historically been the case. Trust yet verify.

$200 Billion Broadband Scandal by Bruce Kushnick

https://www.tcw.org/lefty/Short Stories/$200 Billion Broadband Scandal.pdf

The Book Of Broken Promises: $400 Billion Broadband Scandal & Free The Net By Bruce Kushnick

https://www.tcw.org/lefty/Short Stories/Telecom Book of Broken Promises.pdf

According to the state Public Service Commission, the money will support efforts to bring internet service with download speeds of at least 100 Mbps and upload speeds of at least 20 Mbps (known as "100/20" service) to households and businesses considered to be "unserved" (lacking 23/5 service or entirely lacking service) and "underserved" (lacking 100/20 service), with unserved communities as the priority.
https://www.htrnews.com/story/news/politics/2023/06/26/wisconsin-to-receive-1-billion-in-federal-funds-to-expand-broadband/70357219007/

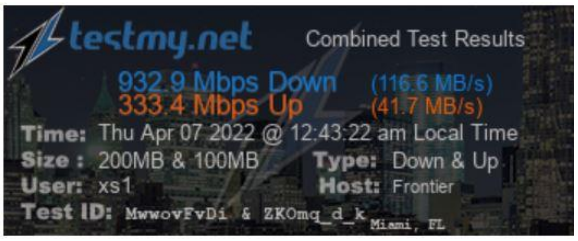
More food for thought in the rather lengthy email below.
Thank You,
Lefty

It has been all quiet on the Spectrum front for a week or so, and I thought I needed to keep the pressure on and stir the pot a bit so to speak. So I filed a complaint with the BBB outlining what I have previously described here and attached some test result files.

Better Business Bureau Complaint against Charter Spectr...	6/27/2023 8:06 AM	Adobe Acrobat D...	79 KB
testmy overnight.JPG	6/24/2023 11:51 AM	JPG File	124 KB
Multithread.txt	6/24/2023 12:33 AM	Text Document	2 KB
MT_on 12-30 am.JPG	6/24/2023 12:24 AM	JPG File	26 KB
MT_off 12-30 am.JPG	6/24/2023 12:21 AM	JPG File	25 KB
Comcast speedtest.jpg	6/23/2023 9:50 AM	JPG File	25 KB
yahoo speedtest.JPG	6/22/2023 11:04 AM	JPG File	48 KB
Cloudflare speed test.JPG	6/21/2023 7:01 PM	JPG File	101 KB
test my speed.JPG	6/21/2023 5:07 PM	JPG File	65 KB
OINTRAnet overlayed over INTERnet Part Three Speed Te...	6/19/2023 4:11 PM	Microsoft Word D...	127 KB
speedtest bertram.JPG	6/19/2023 4:03 PM	JPG File	28 KB
hostingsupport.io.JPG	6/19/2023 3:55 PM	JPG File	58 KB
speedtest .JPG	6/19/2023 3:50 PM	JPG File	29 KB
CST screenshot.JPG	6/19/2023 2:35 PM	JPG File	184 KB

I also decided to send more test results via email to Spectrum.

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Tuesday, June 27, 2023 8:39 AM
To: 'Spectrum OP VP' <VPOP@charter.com>; 'Senior VP' <SVP@charter.com>; ExecVP@charter.com; COO@charter.com; CTO@charter.com; ExecVP-NetOps@charter.com; TestEngineer@charter.com
Cc: datcphotline@wisconsin.gov; spectrumchatsupportengineers@charter.com; 'FCC' <consumercomplaints@fcc.gov>; antitrust@ftc.gov; 'Kolb, Brian J - DATCP' <Brian.Kolb@wisconsin.gov>; aaron.romens@wisconsin.gov
Subject: But wait, there's more...
VP,
Others can get it, but not me?
Others on Frontier, Comcast, and Spectrum elsewhere.
Why not me?
What is unique to Spectrum in NE Wisconsin or the Spectrum TR Hub?
Here is some proof that it is not the test site that is imagining my problem:



https://testmy.net/ipb/forum/11-show-off-your-speed/

Powerful bandwidth makes a powerful speed test
TestMy.net is an independent third party and is not affiliated with your Internet service provider. Our results are unbiased because TMN has no vested interest in the outcome of your speed test. We work for the Internet consumers not the Internet providers. For this reason our servers are hosted outside of all provider networks, in locations where the websites you visit are hosted. Our bandwidth providers are the biggest names in the industry and our servers are hosted directly on some of the largest trunks that make up the Internet. Your ISP should be able to deliver clean, useable bandwidth to these common areas of the Internet.

Me with Multithread off

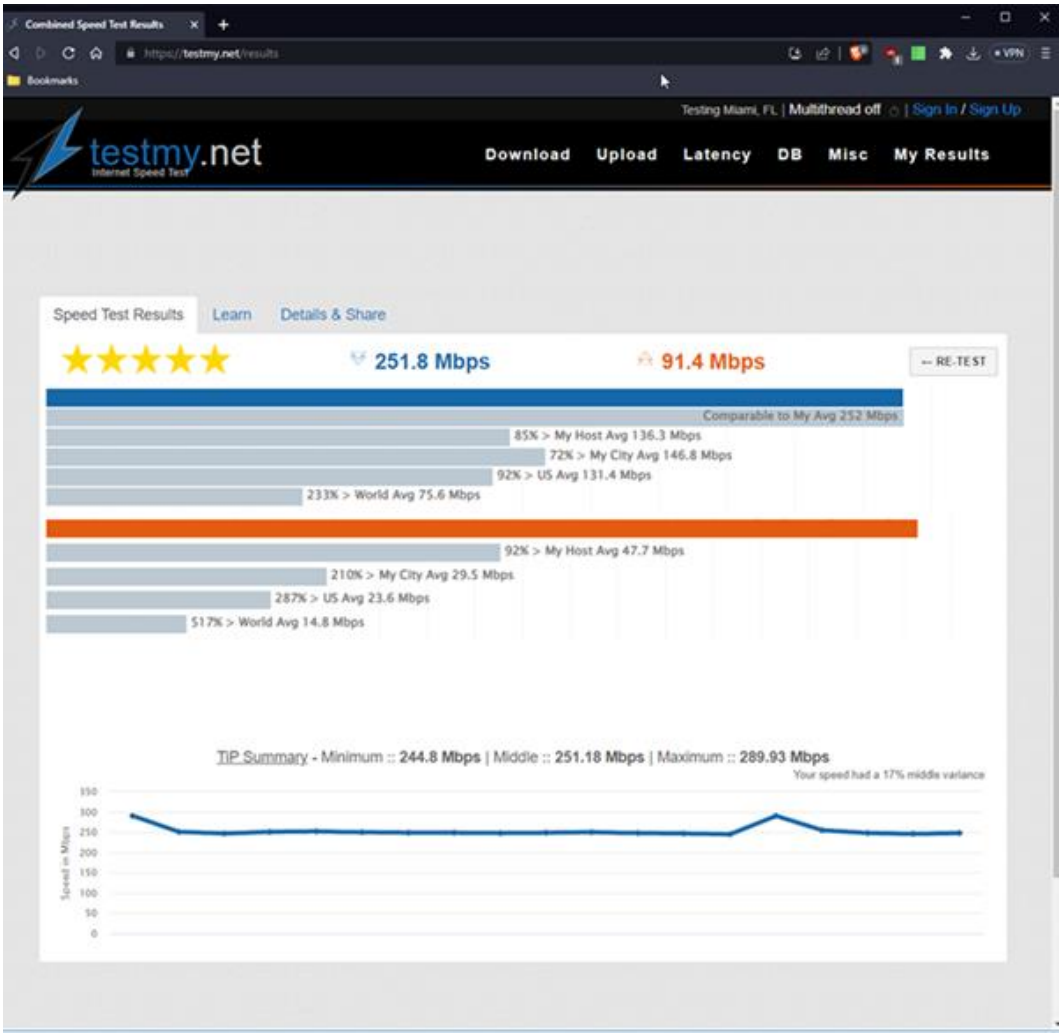
Enabling the multithread speed testing option on your download speed test can really open up your connection for maximum throughput. Multithread isn't the default testing option because it has less detail and can mask certain connection issues. (It's recommend to test both ways and compare your performance. **Powerful, properly configured connections have very little variance between the two bandwidth test types**.) https://testmy.net/multithread

Me with Multithread on

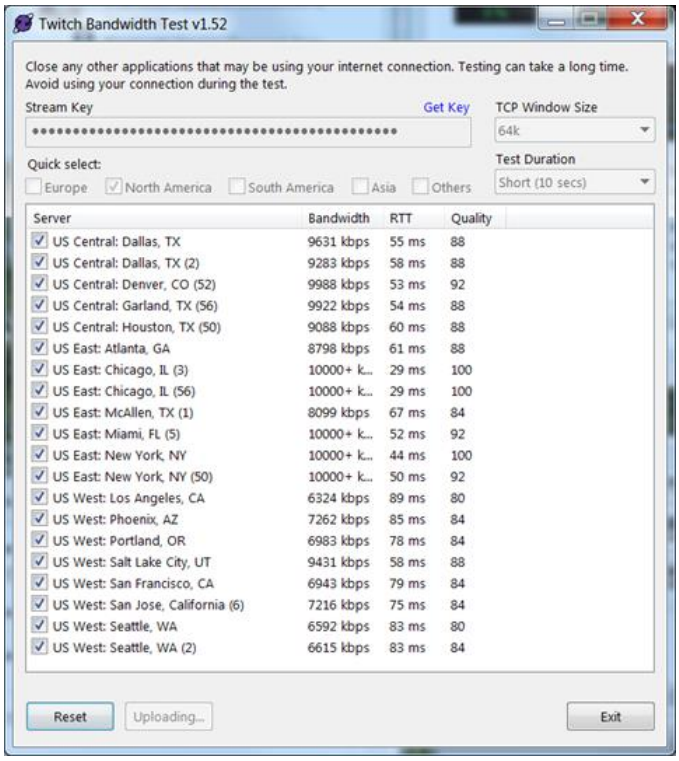
- Total network bandwidth capacity in excess of 2000 Gbps
- TestMy.net's servers are all gigabit or multi-gigabit uplinked
- Hosted network features multi-homed connectivity with bandwidth from independent Tier 1 carriers, combining multiple 10 Gbps connections to create one of the industry's fastest networks.
- Global network reach utilizing over 25 Tier 1 network providers including Comcast, Cox, Time Warner, Charter, Qwest, Google, Level 3, Internap, NTT America, Equinix & Telefónica to name a few.
- Extensive peering relationships across North America, Europe and Asia

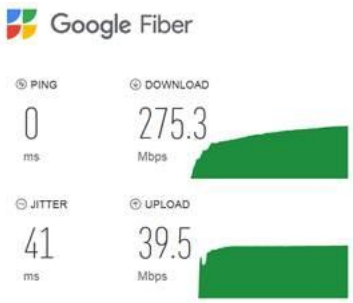
My Overnight readings.

A geek friend in Florida actually gets what he pays for!
"I pay for fiber optic service from Hotwire Communications. Specifically, my plan provides 250 megabit downlink service, and testmy.net seems to concur:"
"What's exciting is that occasionally I get a bump in download speed that's faster than what I'm advertised by Hotwire Communications.
What's also interesting is that the plan I originally signed up for was for 250 Mbit down, 25 Mbit up. They unilaterally increased my uplink speed, for no extra charge, to 100 Mbit. I feel privileged to have this service."
Imagine that, a happy customer.

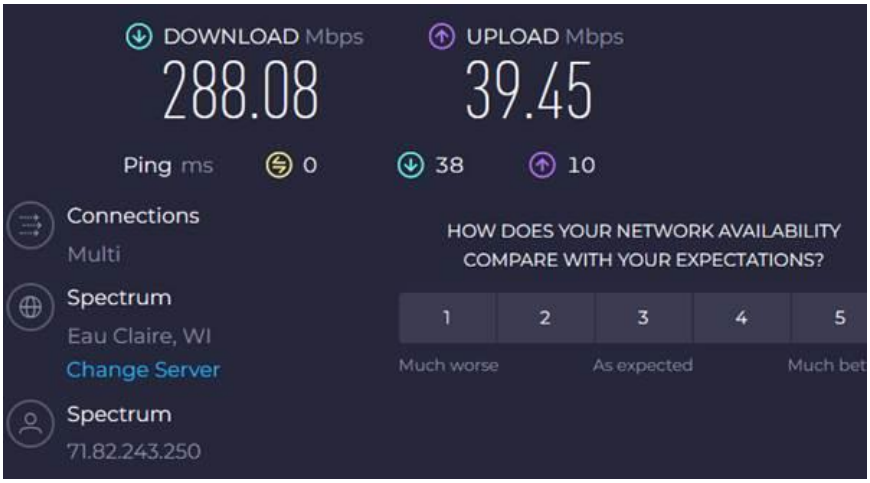


So where does my problem originate?
Has Spectrum made a business decision to not purchase the necessary bandwidth for this area, or perhaps they throttle my available Mbps?
Lefty
From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Thursday, June 29, 2023 1:08 PM
To: 'Spectrum OP VP' <VPOP@charter.com>; 'Senior VP' <SVP@charter.com>; ExecVP@charter.com; COO@charter.com; CTO@charter.com; ExecVP-NetOps@charter.com; TestEngineer@charter.com
Cc: datcphotline@wisconsin.gov; spectrumchatsupportengineers@charter.com; 'FCC' <consumercomplaints@fcc.gov>; antitrust@ftc.gov; 'Kolb, Brian J - DATCP' <Brian.Kolb@wisconsin.gov>; aaron.romens@wisconsin.gov
Subject: But wait, there is yet even more...
All,
Twitch is an American video live streaming service that focuses on video game live streaming, including broadcasts of e-sports competitions, in addition to offering music broadcasts, creative content, and "in real life" streams. Twitch is operated by Twitch Interactive, a subsidiary of Amazon.com, Inc.





Fairly decent for twitch.tv, (although it fades to the west coast) but not so much for Netflix or Prime Video, and are the ones actually use.



From a former mechanic's point of view, using speedtest.net is like putting a voltmeter on a battery, seeing 12 volts of surface voltage and pronouncing it good.
This is what phones and wireless devices do especially the newer ones with multiple radio antennas. This could explain why cellphones and some wireless computers give overly fast inconsistent, and random results, and makes the test too short and low readings are dropped off, to be able to accurately measure speed, especially as compared to Ethernet wired connections. I can understand why they want to use that for marketing, but it's not realistic or in my view legitimate. https://en.wikipedia.org/wiki/MIMO
The real test of a battery or an Internet connection is to put a **load** against it. Only a load tester for a battery can put a partial discharge against it, or a computer to put a sufficient packet download against it, can provide a true test.
Still patiently awaiting a speed fix and/or a retroactive billing adjustment,
Lefty

Well sending the above to Spectrum and copying the DATCP on that email resulted in these responses and an apparent change in personnel at the DATCP.

From: Kolb, Brian J - DATCP [mailto:Brian.Kolb@wisconsin.gov]
Sent: Thursday, June 29, 2023 1:33 PM
To: lefty@tcw.org
Cc: Wade, Regina H - DATCP <regina.wade1@wisconsin.gov>
Subject: Consumer Protection
Lefty,
As discussed during our phone conversation the new Investigator assigned to your complaint will be:
Regina Wade
Consumer Protection Investigator – Mediation Unit
Division of Trade and Consumer Protection
Wisconsin Department of Agriculture, Trade and Consumer Protection
Phone: (608) 224-4653
Fax: (608) 224-4677
regina.wade1@wisconsin.gov
Sincerely,
Brian Kolb
Investigator-Mediation Unit
Bureau of Consumer Protection / Division of Trade and Consumer Protection
Wisconsin Department of Agriculture, Trade and Consumer Protection
2811 Agriculture Dr
Madison WI 53708-8911
Phone: (608) 224-4575
Fax: (608) 224-4677
Brian.kolb@wisconsin.gov

Please fill out our customer survey to help us improve. Thank you!

From: Spectrum OP VP [mailto: VP@charter.com]
Sent: Thursday, June 29, 2023 1:09 PM
To: Lefty Insider <lefty@tcw.org>
Subject: Automatic reply: [EXTERNAL] But wait, there is yet even more...

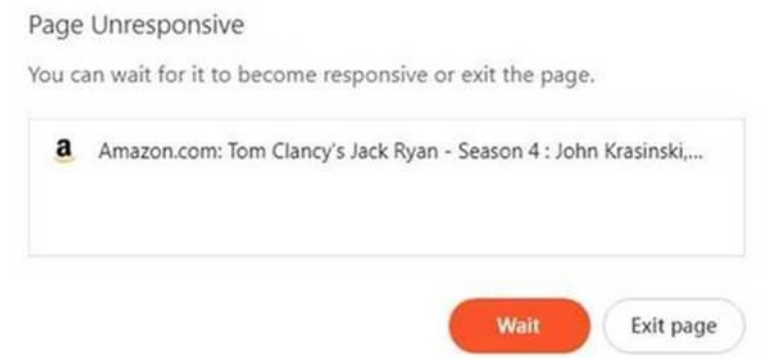
I am on vacation and will respond to your email when I return.

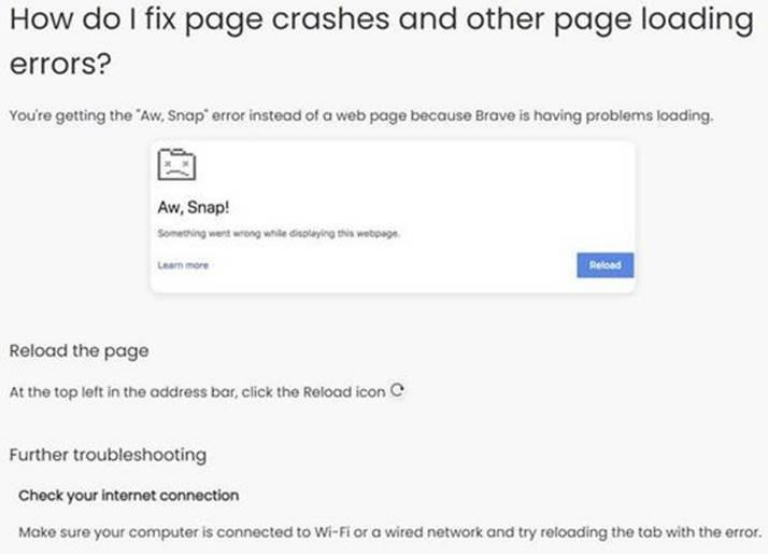
So two weeks' vacation huh, must be nice.

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Monday, July 03, 2023 1:35 PM
To: 'Spectrum OP VP' <VPOP@charter.com>; 'Senior VP' <SVP@charter.com>; ExecVP@charter.com; COO@charter.com; CTO@charter.com; ExecVP-NetOps@charter.com; TestEngineer@charter.com
Cc: datcphotline@wisconsin.gov; spectrumchatsupportengineers@charter.com; 'FCC' <consumercomplaints@fcc.gov>; antitrust@ftc.gov; aaron.romens@wisconsin.gov; regina.wade1@wisconsin.gov
Subject: Connection woes

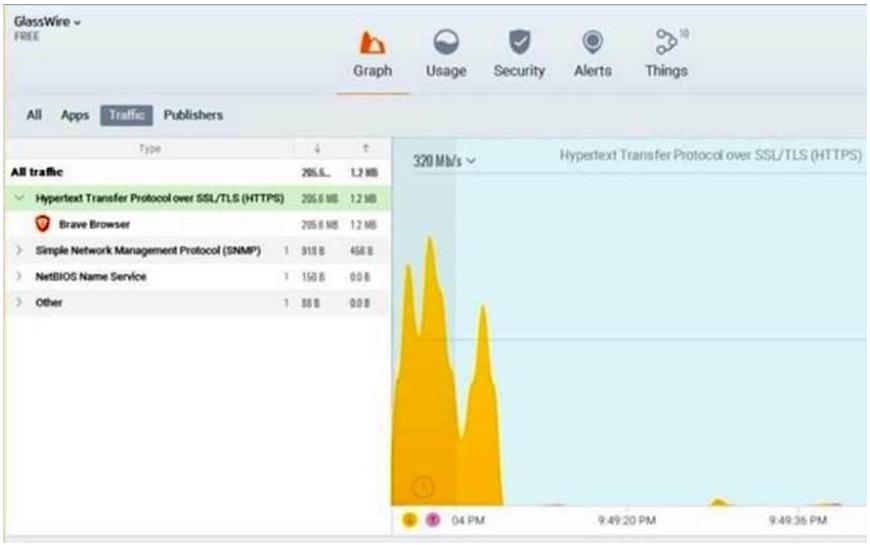
VP,
Haven't heard from you in a while.
What do you make of the info below?
Lefty

Streaming error, and then an indication of a connection drop out.



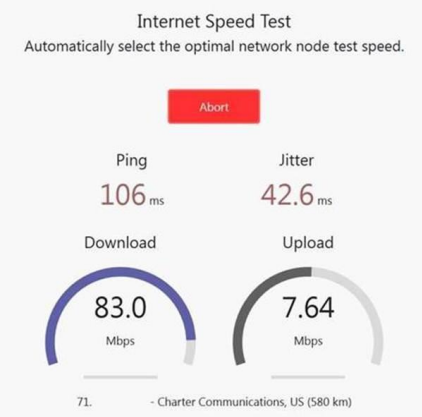


Based on my testing, Prime Video has about a three minute buffer on streaming videos, so these possible drop outs could be quite lengthy.
This is opposed to my connection errors on twit.tv below which appears to have no buffer at all.



This seems like a lot of bandwidth to stream a single movie.
I know that the upload stream subtracts from download stream, but it isn't that much.
Why is the bandwidth usage so high? 205Mbps (25MBps) I suspect it has something to do with this large amount of buffering.

And then there is this test using open source Librespeed for testing:



This to a VA server. Double the speed to NY and LA servers.
https://internetspeedtestx.com/
https://internetspeedtestx.com/en/about-us
https://internetspeedtestx.com/en/choice-server-speed-test
https://github.com/librespeed/speedtest

7/7/23 So I received a voice mail from a Spectrum Tech today asking if he could stop by and pick up the SK Whitebox.

Shortly after that I received this email from the VP and you can see my rather direct and increasingly impatient response below.

From: Spectrum OP VP [mailto: VP@charter.com]
Sent: Thursday, July 06, 2023 5:06 PM
To: Lefty Insider <lefty@tcw.org>
Subject: RE: [EXTERNAL] Connection woes

Hi Mr. Insider,
Sorry I have not responded but I was on vacation and did not have access to email.

I see your results have not changed significantly regardless of the sites you are accessing. Now that I am back in the office I will check with the network team to see if they have any additional thoughts / suggestions about what you are seeing from your tests and why it is significantly different from the SamKnows tests from your house as well as from the parallel testing we are doing in the hub site.

I understand from the network engineering team that the SamKnows device has been disconnected from your router. I don't think we will see any new information from the device going forward so I think it makes sense to have someone come pick it up.

We can connect next week on any findings from the network team. In the meantime, Tech Mgr. Sup. or someone from his team will arrange to get the SamKnows device from you.
Thanks,
VP

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Friday, July 07, 2023 10:17 AM
To: 'Spectrum OP VP' <VPOP@charter.com>; SVP@charter.com; ExecVP@charter.com; COO@charter.com; CTO@charter.com; ExecVP-NetOps@charter.com; TestEngineer@charter.com
Cc: datcphotline@wisconsin.gov; spectrumchatsupportengineers@charter.com; 'FCC' <consumercomplaints@fcc.gov>; antitrust@ftc.gov; aaron.romens@wisconsin.gov; regina.wade1@wisconsin.gov
Subject: RE: [EXTERNAL] Connection woes and More comprehensive testing
VP,
I have been doing some more extensive testing outside of your SPECTRUMNET, as I am paying for Internet access nationwide, if not globally.
Some holiday testing, when SPECRUMNET should not have been real busy.
4 computers x 2 tests each, down MultiThreaded, down Linear (no MT) to three test servers, CO, NY, and TX.
The linear tests are perhaps more accurate as they only depend on one test server. However the MT (multiserver) tests can be brought down by one bad server, or can show deceptively good results (masking network congestion) by combining results from multiple servers.
Anyway, the attached spreadsheet with multiple tabs show the continuing substandard results.

"sites you are accessing"
You make that sound like, my connection practices are somehow the issue here.
I am still hopeful that we can use the SamKnows Whitebox **for its originally intended and FCC approved use**, to test my connections to commonly used sites by all Internet users, like Netflix, YouTube, and Amazon Prime.
I believe you have intentionally corrupted the use of this device in this case to serve your own narrow purposes. No amount of language parsing can disguise this fact.
Perhaps this SK's merger with Cisco will bring some new testing possibilities.
I believe that it is premature to give up on the potential of SK Whitebox testing just now.
Lefty

http://www.tcw.org/07-04-2023-testmy.net-stats.pdf

And then of course I had yet another idea for more testing.

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Saturday, July 08, 2023 10:30 AM
To: 'Spectrum OP VP <VPOP@charter.com>; 'SVP@charter.com; ExecVP@charter.com; COO@charter.com; CTO@charter.com; ExecVP-NetOps@charter.com; TestEngineer@charter.com
Cc: datcphotline@wisconsin.gov; spectrumchatsupportengineers@charter.com; 'FCC' <consumercomplaints@fcc.gov>; antitrust@ftc.gov; aaron.romens@wisconsin.gov; regina.wade1@wisconsin.gov
Subject: Comprehensive comparison testing (with a distinctive and definitive cherry on top)
VP,
Comparison testing of the INTERNET to SPECTUMNET.

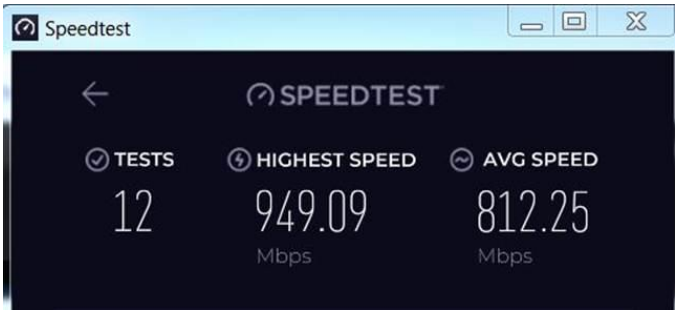
A Samsung tablet and a Surface4 tablet connected to testmy.net (Colorado and then Dallas test servers) compared to speedtest results.
Lefty

Problem with the CO test sever or Spectrum?

Time -5	Speed	Provider	Size	ConnectID		TestID
7/7/23 7:34:09 am	37.15 Mbps 4.64 MB/s	Spectrum	200 MB	658642493668	US	tpfEX4vcJ
7/7/23 6:33:22 am	37.41 Mbps 4.68 MB/s	Spectrum	200 MB	658642493668	US	eA4Flab_B
7/7/23 5:32:35 am	37.23 Mbps 4.65 MB/s	Spectrum	200 MB	658642493668	US	pYzWLa5k9
7/7/23 4:31:48 am	31.46 Mbps 3.93 MB/s	Spectrum	200 MB	658642493668	US	13OGBMcgE
7/7/23 3:30:53 am	31.39 Mbps 3.92 MB/s	Spectrum	200 MB	658642493668	US	aXVtUqCTU
7/7/23 2:29:57 am	93.03 Mbps 11.63 MB/s	Spectrum	200 MB	658642493668	US	B6WhRSM1
7/7/23 1:29:38 am	86.03 Mbps 10.75 MB/s	Spectrum	200 MB	658642493668	US	zD37KOkus

<iframe loading="lazy" src="https://testmy.net/stats/?t=u&d=07-07-2023&l=25&z=26&q=&f=1" scrolling="yes" frameborder="0" height="445" width="100%"></iframe>?t=u&d=07-07-2023&l=25&z=26&q='s Speed Test Results

It's not the computer (Samsung tablet) as it will do just fine to the Spectrum speedtest beauty sites.



It's not the server. He, the Admin, is using a pretty good but not perfect COMCAST connection. They reduced his price when he show them his test data.

Test site admin results below:

- ★★ Admin

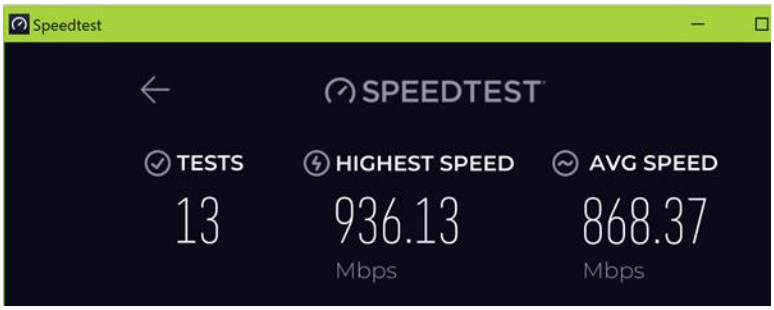
  Problem with the CO test sever or Spectrum? Not the server.

890.4 Mbps [111.3 MB/s] | Downloaded 200 MB in 1.8 seconds
Pre-Test: 735.2 Mbps [91.9 MB/s] | Downloaded 60 MB in 0.65 seconds
Download Graph: [504,656,702.4,845.6,735.2,763.2,497.6,610.4,692,890.4,936,931.2]

Test Latency 18 ms Avg - 10 ms Min
Latency Graph: [21,21,16,16,19,14,14,19,27,17,26,10]
Locale: co.testmy.net
Graph & Validate: https://testmy.net/x/tmn?resultID=SWZWDFC8O

481.6 Mbps [60.2 MB/s] | Downloaded 138.6 MB Linear in 2.3 seconds
Pre-Test: 375.2 Mbps [46.9 MB/s] | Downloaded 60 MB in 1.28 seconds
Download Graph: [151.2,194.4,236.8,375.2,450.4,487.2,478.4,475.2,482.4,488.8,481.6,478.4]
Test Latency 27 ms Avg - 16 ms Min
Latency Graph: [19,26,19,22,16,19,16,27,24,82,25,26]
Locale: co.testmy.net
Graph & Validate: https://testmy.net/x/tmn?resultID=Lh4JaCfuA

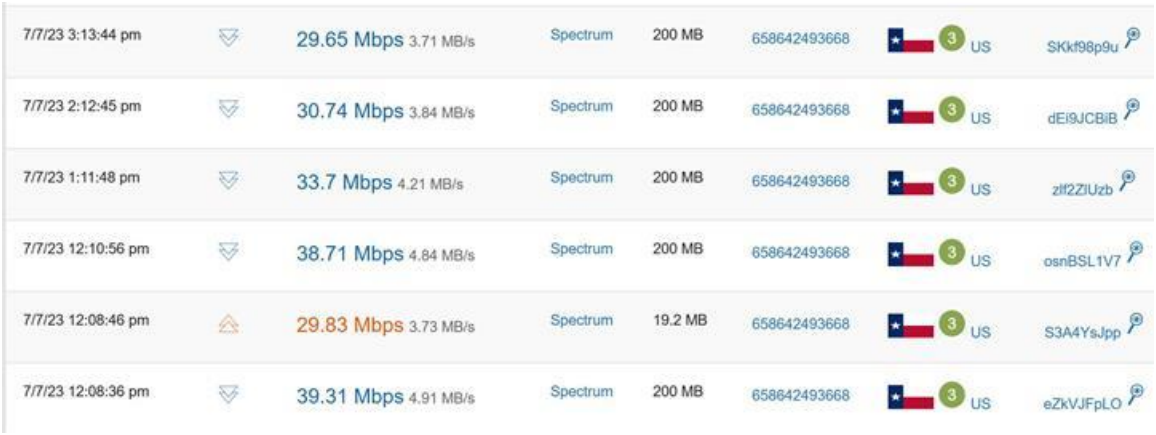
Again, it's not the computer (Surface 4 tablet) as it will do fine to the Spectrum speedtest beauty sites.



But on the real INTERNET, no so much.

Time -5	Speed	Provider	Size	ConnectID		TestID
7/7/23 7:06:09 pm	223.57 Mbps 27.95 MB/s	Spectrum	200 MB	658642493668	US	ZmAeL8G02
7/7/23 6:06:01 pm	225.92 Mbps 28.24 MB/s	Spectrum	200 MB	658642493668	US	mizql6Djc
7/7/23 5:05:53 pm	223.48 Mbps 27.93 MB/s	Spectrum	200 MB	658642493668	US	Mzv9s9x8m
7/7/23 4:05:45 pm	228.99 Mbps 28.62 MB/s	Spectrum	200 MB	658642493668	US	nq1jWTXd4

Surface4 Firefox test results



7/7/23 3:13:44 pm	29.65 Mbps 3.71 MB/s	Spectrum	200 MB	658642493668	US	SKkf98p9u
7/7/23 2:12:45 pm	30.74 Mbps 3.84 MB/s	Spectrum	200 MB	658642493668	US	dEi9JCBiB
7/7/23 1:11:48 pm	33.7 Mbps 4.21 MB/s	Spectrum	200 MB	658642493668	US	zlf2ZiUzb
7/7/23 12:10:56 pm	38.71 Mbps 4.84 MB/s	Spectrum	200 MB	658642493668	US	osnBSL1V7
7/7/23 12:08:46 pm	29.83 Mbps 3.73 MB/s	Spectrum	19.2 MB	658642493668	US	S3A4YsJpp
7/7/23 12:08:36 pm	39.31 Mbps 4.91 MB/s	Spectrum	200 MB	658642493668	US	eZkVJFpLO

Surface4 Edge test results

So if it's not the computers/router and not the test servers, who does that leave as the culprit?

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Sunday, July 09, 2023 10:15 AM
To: 'Spectrum OP VP' <VPOP@charter.com>;SVP@charter.com; ExecVP@charter.com; COO@charter.com; CTO@charter.com; ExecVP-NetOps@charter.com; TestEngineer@charter.com
Cc: datcphotline@wisconsin.gov; spectrumchatsupportengineers@charter.com; 'FCC' <consumercomplaints@fcc.gov>; antitrust@ftc.gov; aaron.romens@wisconsin.gov; regina.wade1@wisconsin.gov
Subject: Time for some good news?
VP,
Time for some good news? I ran the Wehe software, (Wehe: Check Your ISP for Net Neutrality Violations), against my connection to see if you were throttling me. I am pleased to report that I am all good with Netflix, Amazon, Hulu, and YouTube. So you've got that going for you…
OTOH, I still get streaming error messages from these sites, so at least Spectrum is not causing this on purpose, to my knowledge or ability to test anyway. :-)
Now if you can get me an account on SamKnows, which based on the time and effort I have put into this testing over these three years, is very least you could do.
This way I could do some further testing with the Whitebox I have, and prove you right and me wrong.

PS. I plugged the Whitebox back in, so it should be collecting data again.
Lefty

This is how to use Wehe:
Wehe: Check Your ISP for Net Neutrality Violations
https://wehe.meddle.mobi/td_details.html
https://github.com/NEU-SNS/wehe-cmdline#run-the-jar
Download from here:
https://github.com/NEU-SNS/wehe-cmdline/archive/refs/heads/master.zip
Unzip, and run wehe-cmdline.jar from the unzipped directory

java -jar wehe-cmdline.jar -n netflix -c -r results/ -l info
java -jar wehe-cmdline.jar -n amazon -c -r results/ -l info
java -jar wehe-cmdline.jar -n hulu -c -r results/ -l info
java -jar wehe-cmdline.jar -n youtube -c -r results/ -l info

You should get something like this in the log files:

```
RESULT: No differentiation
```

No differentiation meaning that the two tests against the server were the same. It does not measure bandwidth.

From: Spectrum OP VP [mailto: VP@charter.com]
Sent: Monday, July 10, 2023 10:35 AM
To: Lefty Insider <lefty@tcw.org>; SVP@charter.com; TestEngineer@charter.com
Subject: RE: [EXTERNAL] Time for some good news?

Mr. Insider,
First, I glad we agree that Spectrum is not throttling your service.

Second, we are not able to get you a login to the account for the device you have as that account is a Spectrum corporate account with access to many SamKnows devices we have deployed across the network. Can you help me understand what additional data you are seeking and / or scenarios you would like to test? Maybe we can assist with the device we have in your house and happy to share the data that exists thru the SamKnows device. The other option is to look at a new SamKnows device that can be set on an independent account.
Let me know your thoughts.
VP

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Monday, July 10, 2023 11:48 AM
To: Spectrum OP VP [mailto: VP@charter.com];SVP@charter.com>; TestEngineer@charter.com>
Cc: datcphotline@wisconsin.gov; spectrumchatsupportengineers@charter.com; 'FCC' <consumercomplaints@fcc.gov>; antitrust@ftc.gov; aaron.romens@wisconsin.gov; regina.wade1@wisconsin.gov
Subject: RE: [EXTERNAL] Time for some good news?

VP, Senior VP and Testing Engineer,
Well not blatantly anyway, nor apparently are any of the US based wired ISP's according to my well-placed sources. So I wouldn't be dislocating your shoulder, patting yourself on the back just yet if I were you. Trust but verify is my motto.
I previously understood the limitations with your existing SK corporate account and in sympathy for that is why I agreed to use this advice.
I was not however aware at that time of how limited your data collection and/or sharing would end up being.
Since you have an existing business to business relationship with SK, creating a new SK account for my existing device, or creating a new account for a different WB 9.0 device will I believe have the same effect. Which is to allow me to run the standard SK tests against my (and many others in NE WI) existing connection practices.
Quality of Service measurements
Quality of Experience measurements
https://www.samknows.com/blog/testing-principles

I will ask again, are you currently collecting data from my existing device?
Lefty

Meanwhile I got this in response to my previous complaint:

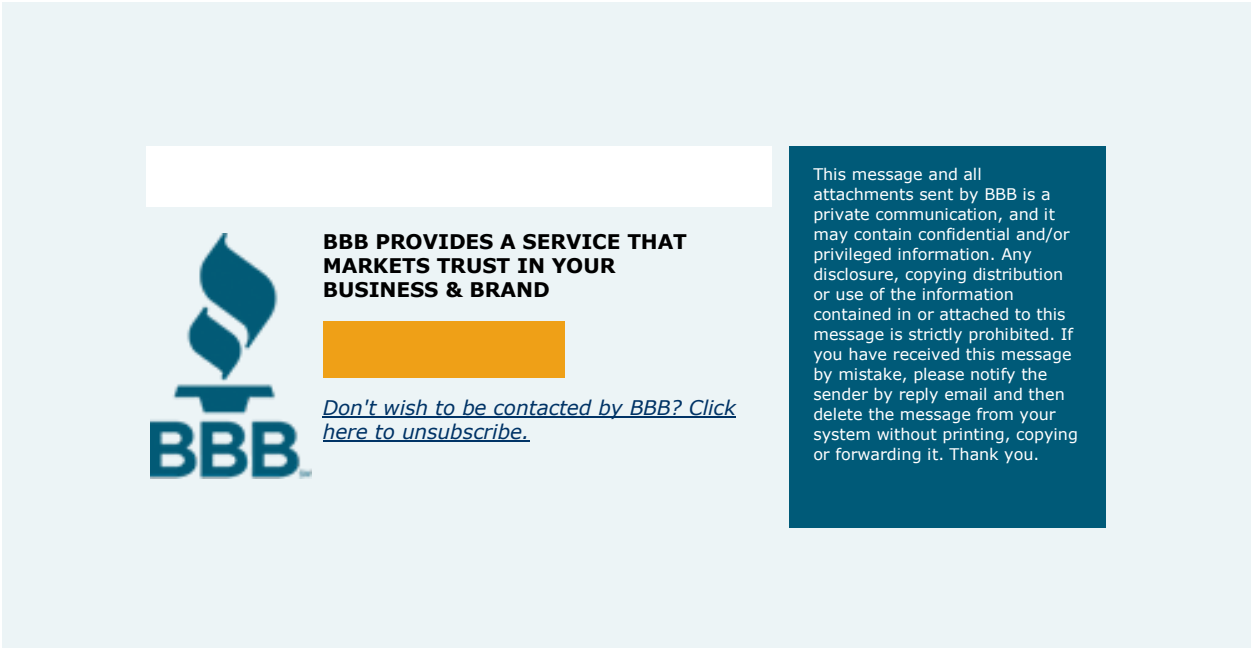
From: Better Business Bureau [mailto:complaints@ct.bbb.org]
Sent: Monday, July 10, 2023 2:32 PM
To: lefty@tcw.org
Subject: You have a New Message from BBB Serving Connecticut Regarding Complaint #20242113

Better Business Bureau®

BBB PROVIDES A SERVICE THAT MARKETS TRUST IN YOUR BUSINESS & BRAND

Company: Charter Spectrum
Consumer: Citizen
This e-mail is to notify you that you currently have a new message with BBB in regards to complaint #20242113.
Please click on the link below to access BBB's Online Complaint Management System to read this message.
Go to: https://respond.bbb.org/respond/
Enter Code: 56218262-815F9
This is a post-only mailing. Replies to this message are not monitored or answered. If you have any further questions or concerns, please do not hesitate to contact us at complaints@ct.bbb.org or 860-740-4500.
Thank you.

Please be sure to monitor your spam/junk/promotional folders for any future communications from BBB.



Spectrum's response was that they are working on it. I rejected this response in order to keep the complaint open.

From: Spectrum OP VP [mailto: VP@charter.com]
Sent: Monday, July 10, 2023 5:29 PM
To: Lefty Insider <lefty@tcw.org>;SVP@charter.com>; TestEngineer@charter.com
Subject: RE: [EXTERNAL] Time for some good news?

Mr. Insider,
If you have reconnected the device then I assume we are collecting the SK data. I will confirm on Tuesday that we are and evaluate / discuss options for data visibility.
VP

What I haven't told him just yet, is that I connected my router to the WAN port on the Whitebox rather than the SFP port just to see what would happen. The LAN ports on the Whitebox are dead however when I do this. I suspect that the WAN port, and LAN ports have been disabled in firmware even with the SFP port adaptor removed.

And then I got this. Can you say passing the buck?

From: Wisconsin Consumer Protection [mailto:consumerprotection@doj.state.wi.us]
Sent: Tuesday, July 11, 2023 7:34 AM
To: lefty@tcw.org
Cc: DATCP Hotline DATCPHotline@wi.gov>
Subject: Citizen Complaint 2023-04332

Citizen:
Thank you for contacting the Wisconsin Department of Justice concerning your complaint. We are sorry to hear of the difficulties you are having, and we appreciate you taking the time to bring your concerns to our attention.

Under Wisconsin law, the Wisconsin Department of Agriculture, Trade and Consumer Protection (DATCP) is the state agency with the primary authority to conduct initial reviews and subsequent investigations of consumer complaints like yours. Consequently, your correspondence has been forwarded to DATCP and they will attempt to assist you in resolving your complaint. Should DATCP, after an investigation, determine that an enforcement action in court might be warranted, it can refer the matter back to our office for possible litigation.

If you have other questions or further information that could assist DATCP as it reviews your complaint, please feel free to call DATCP at 1-800-422-7128. Make sure to notify DATCP if your address or phone number changes. Correspondence can be mailed to:

> Wisconsin Department of Agriculture, Trade and Consumer Protection
> 2811 Agriculture Drive
> P.O. Box 8911
> Madison, WI 53708-8911

We hope that your complaint gets resolved to your satisfaction.

Sincerely,

State of Wisconsin Department of Justice
Division of Legal Services/Public Protection Unit
17 West Main Street
Madison, WI 53703
consumerprotection@doj.state.wi.us
Phone: (608) 266-1852

PLEASE NOTE: While government records are generally subject to disclosure pursuant to the public records law, this email, including any attachments, may contain confidential and/or privileged information exempt from public disclosure. If you are not the intended recipient or believe that you received this email in error, please notify the sender immediately

From: Spectrum OP VP [mailto: VP@charter.com]
Sent: Tuesday, July 11, 2023 10:04 AM
To: Lefty Insider <lefty@tcw.org>; SVP@charter.com; TestEngineer@charter.com
Subject: RE: [EXTERNAL] Time for some good news?
Lefty,
Let's catch up on Wednesday. I am fully occupied today. I did hear that your SK is not recording data. If it is connected to your router you may need to power cycle the device.
VP

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Tuesday, July 11, 2023 10:51 AM
To: 'Spectrum OP VP' <VPOP@charter.com>
Subject: RE: [EXTERNAL] Time for some good news?
VP,
Ok, I just looked at it, and I see that I am plugged into the WAN port on the WB.
Does that port not work?
Lefty

From: Spectrum OP VP [mailto: VP@charter.com]
Sent: Tuesday, July 11, 2023 11:09 AM
To: Lefty Insider <lefty@tcw.org>
Subject: RE: [EXTERNAL] Time for some good news?
Mr. Insider,
That port does not work for testing, no.
The device must be plugged in into the router to the SFP module on the Whitebox. Once all cables are connected, the Whitebox must be restarted.
VP

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Tuesday, July 11, 2023 11:58 AM
To: 'Spectrum OP VP' <VPOP@charter.com>
Subject: RE: [EXTERNAL] Time for some good news?
VP,
Interesting that those instructions were not in the box, and your tech pulled the SFP out of his pocket.
Also interesting that we are using a 2.5 Gbps SFP port to plug into my 1Gbps router port, rather than the 1Gbps WAN port.
Very interesting that the url link in the instructions, support.samknows.one, throws a 404 error.
Lefty

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Monday, July 10, 2023 10:49 PM
To: Spectrum OP VP VP@charter.com>; SVP@charter.com; TestEngineer@charter.com
Subject: RE: [EXTERNAL] Time for some good news?
VP,
Ok, let's talk on the phone tomorrow when you know something and have something to offer me.
Lefty

I am not typically a suspicious person, but corporate behaviors do at times make me nervous. Meanwhile, I decided to send the email below.

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Tuesday, July 11, 2023 1:28 PM
To: 'Spectrum OP VP' <VPOP@charter.com>;SVP@charter.com; ExecVP@charter.com; COO@charter.com; CTO@charter.com; ExecVP-NetOps@charter.com; TestEngineer@charter.com
Cc: datcphotline@wisconsin.gov; spectrumchatsupportengineers@charter.com; 'FCC' <consumercomplaints@fcc.gov>; antitrust@ftc.gov; aaron.romens@wisconsin.gov; regina.wade1@wisconsin.gov
Subject: Executive Summary of Charter/Spectrum Internet Speed Testing from March 2020-July 2023

Spectrum et al,
I thought it might be useful to create a crib notes summary version of the massive amount of testing I have done in an attempt to get Charter/Spectrum to give me the megabits that I have been paying them for. Throughout this saga I have been focused on eliminating variables in these testing procedures in order to achieve accuracy, believability, and repeatability. This issue presents itself across all 10 of my computers, with multiple OS's, web browsers, and PC form factors.

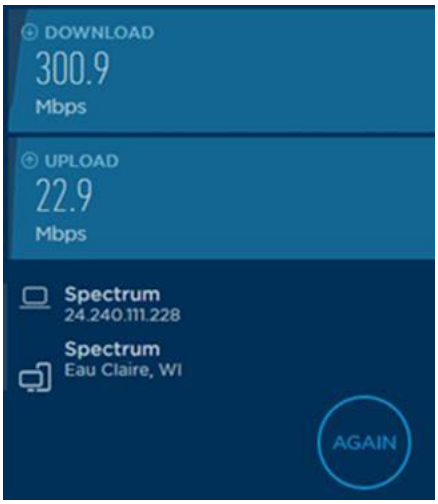
But first some backstory, prequel/origin story, if you will humor this writer.
In 2020, amidst the pandemic, I was using a VPN and Tor to do my Dark Web research for my third and fourth books. I was also playing with a VM. 100 Mbps wasn't cutting it, I was also wireless at this point so I had that degradation despite upgrading my router to Wi-Fi 6 and network cards to wireless 802.11 ac/ax.
So I upgraded to their 300Mbps service and saw no improvement. So I started testing and emailing results, writing and after several months of insisting that I was the problem, they (a VP) after several months reduced my price. Meanwhile they say they bumped my service to Ultra 400Mbps.

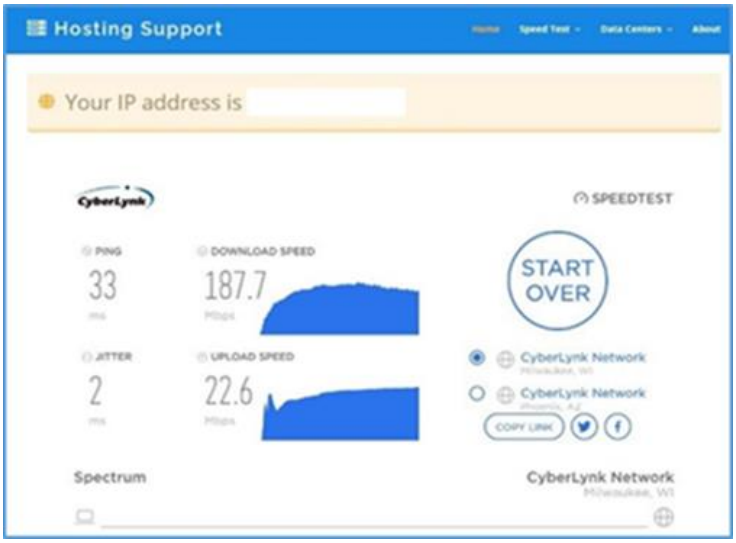
Test Site	Speed
ATT	140
Cox	158
Fast	190
Speedtest	369
Speakeasy	212
Spectrum	332
Speedcheck	128
Xfinity	156

There were many modem swaps done, much line testing, many technicians, tech managers, tech supervisors of managers ad nausea, (8) to the house and I still had these results:
(The accompanying Excel spreadsheet shows that only 70 Tests Out Of 600 (12%) Reach the Advertised Speed of the Charter/Spectrum Internet Ultra 400Mbps Network Connection)
http://www.tcw.org/Internet Speedtests grid.pdf

Then in March of 2023 they sent me a notice that I have a free upgrade to 500Mbps.

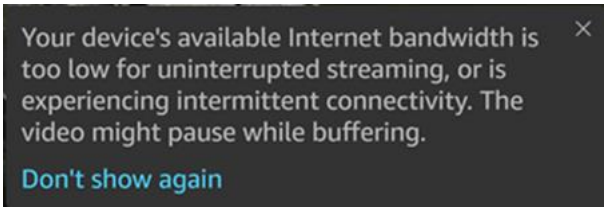
So I started testing again, only now with Cat6/7 wired Ethernet, and to only one Spectrum test site, to reduce variables, and could only get that speed inside of 200 miles within their Intranet I will call SPECTUMNET. I was getting more like 90Mbps with File Transfer Protocol or FTP for moving large files.
From my experience two years earlier, I knew that there were a lot of bad speed test sites out there, many dozens in fact. So I focused mostly on their recommended Spectrum test site in Eau Claire, WI.



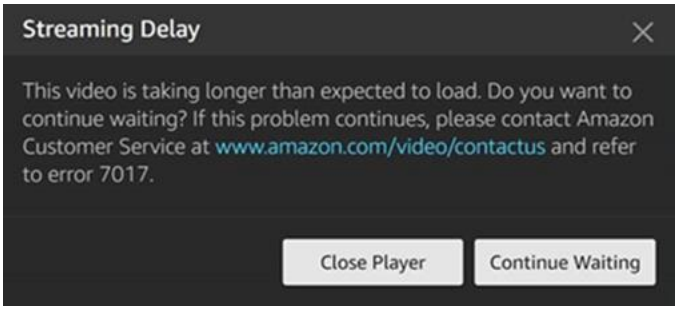


The results there could be really good or really bad, no rhyme or reason, no consistency, and no discernable patterns. There were huge variance across my ten computer network, with various operating systems, computer form factors, and software installations. I worked with Spectrum on this for months and eventually it became more consistent yet not reflective of my performance outside of SPECTRUMNET.

And I continued to see these:



So after many, many, tests I gave up on speedtest.net and speedtest.exe as being erratic, unreliable inconsistent, and falsely positive.
Meanwhile…

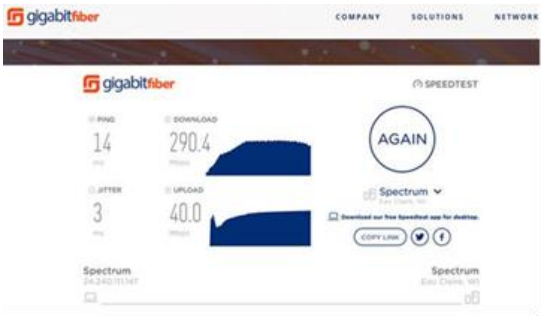


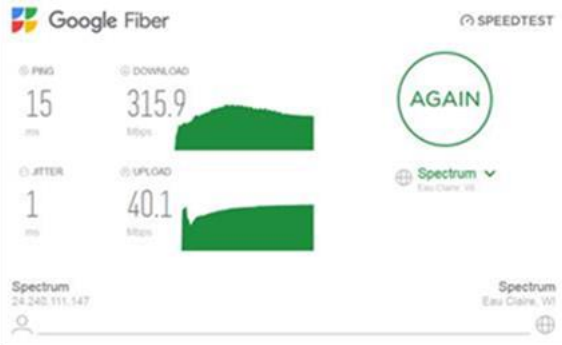
Amazon Prime Error 7017 'Video is taking longer than expected...
appuals.com › home › streaming › amazon
June 29, 2021 - But if you try to stream content from Amazon Prime from a Smart TV natively or using a dongle like Chromecast or Roku, the bandwidth requirement is 3.5 Mbps. If you're on a limited plan, there's a chance that you might be encountering the error code 7017 because **your ISP (Internet Service Provider) is not currently providing you with enough bandwidth to use this service** - Most likely due to a technical reason (especially if previously you were able to stream normally).

http://tcw.org/OS & Browser compare.pdf
I suspected that they could not actually deliver a 1000Mbps service to my rural area, wanted to prove it, so I upgraded to that and again could only get that speed inside of 200 miles within their SPECTUMNET.

According to the Ookla Wiki, the fastest 10% and slowest 30% of your results are DISCARDED with speedtest.net. The remaining data is averaged together to determine the final result.
Ookla speed tests are also multithreaded, meaning that they open more than one connection to the host and combine the speeds, as do web browsers. This often can mask congestion issues, making your connection look better than it really is.

It is interesting that at the 1 Gbps high speed fiber optic tests sites I saw no better results.





TMN is the most accurate site I have found so far, pending further testing with the SamKnows Whitebox. It shows I am getting about 400+Mbps on a long term multithreaded test to a Colorado Springs test server and about half of that on a more accurate linear test.

Testing as shown above for 10 straight days running every hour or so randomly. These more than 400 unique combined U/D tests involve sending a 20MB upload traffic probe and receiving a 200BMB download.

Testmy.net has multi-homed connectivity and bandwidth from over 25 independent Tier 1 carriers including Comcast, Cox, Time Warner, Charter, Qwest, Google, Level 3, Internap, NTT America, Equinix & Telefónica to name a few. The network has a total capacity of over 2000 Gbps and their servers have multiple gigabit uplinks into that network.

- So back in 2020 when I upgraded to 300/400 Mbps, I was getting 200-250 somewhat consistently on my long term tests.
- Now in 2023 after upgrading to 1000 Mbps, I am getting 300-500 fairly consistently on my long term tests. Short term speed tests on a wide range of test sites reflect far lower results.

I want to pay for only what I am getting, not what you advertise. In my estimation I have overpaid by a couple of hundred dollars this year and a couple thousand dollars over the past five years.

Near as I can tell based on publically available information, Spectrum has somewhere in excess of 2500 IP addresses (customers/routers) just in NE WI who are also potentially shorted in this way.

Blue is Charter, Red is the old TWC areas. The rest is covered by Frontier, TDS, many small wireless broadband ISP's like Netwurx, cellphone companies, and much is just not covered at all.

I don't really need 1000, (I just upgraded as a test) 500 would be fine if I could actually get it. There is no evidence that I can.
Yet because of this corporate monopoly, if I downgrade to 500 I will still pay the same $100 per month. If I downgrade to 300 for better pricing, I might get 200 which is not enough.
So I am stuck in some uncompetitive Charter Marketing Catch-22 bullshit here.

- Charter/Spectrum 940Mbps/40Mbps$89.99/ $114.99
- Verizon FiOS Gigabit Connection 940/880 Mbps $69.99 /mo.
- AT&T Internet 1000 940/880Mbps $60 /mo.
- Gigabit Internet by XFINITY Comcast 1 Gbps/35 Mbps $70.00 /mo.

Meanwhile here I am again. Low speed _and_ apparent connection dropouts.

So here we have tests from 7/10 my router and my modem both showing the same approximate results. 40ish from the router and the modem with a linear test. 300ish from the router and the modem with the multithreaded test to testmy.net from my Intel NUC.

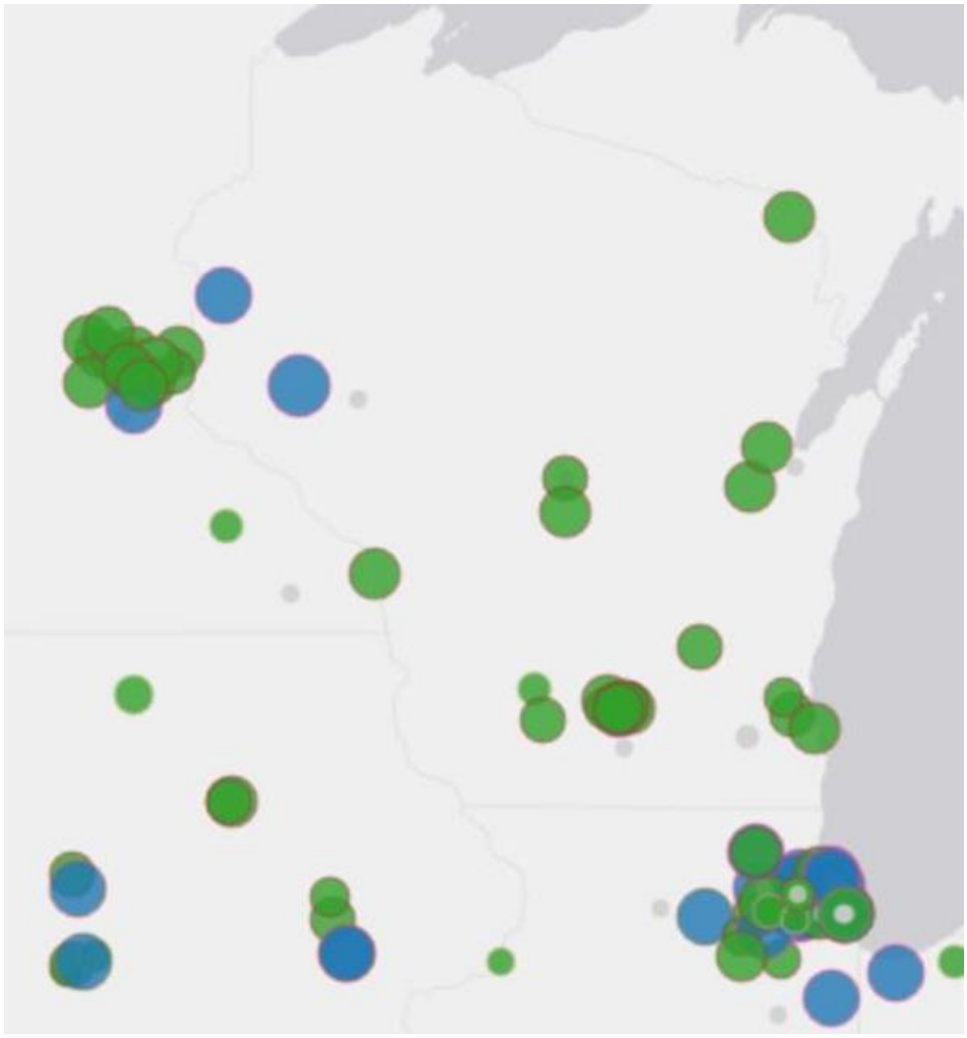
Time -5	Speed	Provider	Size	ConnectID		TestID
7/10/23 8:24:33 pm	37.64 Mbps 4.7 MB/s	Spectrum	56.6 MB	658642493668	US	zEeClFvCu
7/10/23 8:24:09 pm	297.29 Mbps 37.16 MB/s	Spectrum	201 MB	658642493668	US	6F3iS_aHC
7/10/23 8:15:16 pm	329.37 Mbps 41.17 MB/s	Spectrum	201 MB	624636878463	US	7lIAh1gOi
7/10/23 8:14:20 pm	38.47 Mbps 4.81 MB/s	Spectrum	21.4 MB	624636878463	US	ESeOmF8FY

Of course all the more detailed information, commentary, data evidence, and test results, exist in my previous emails.

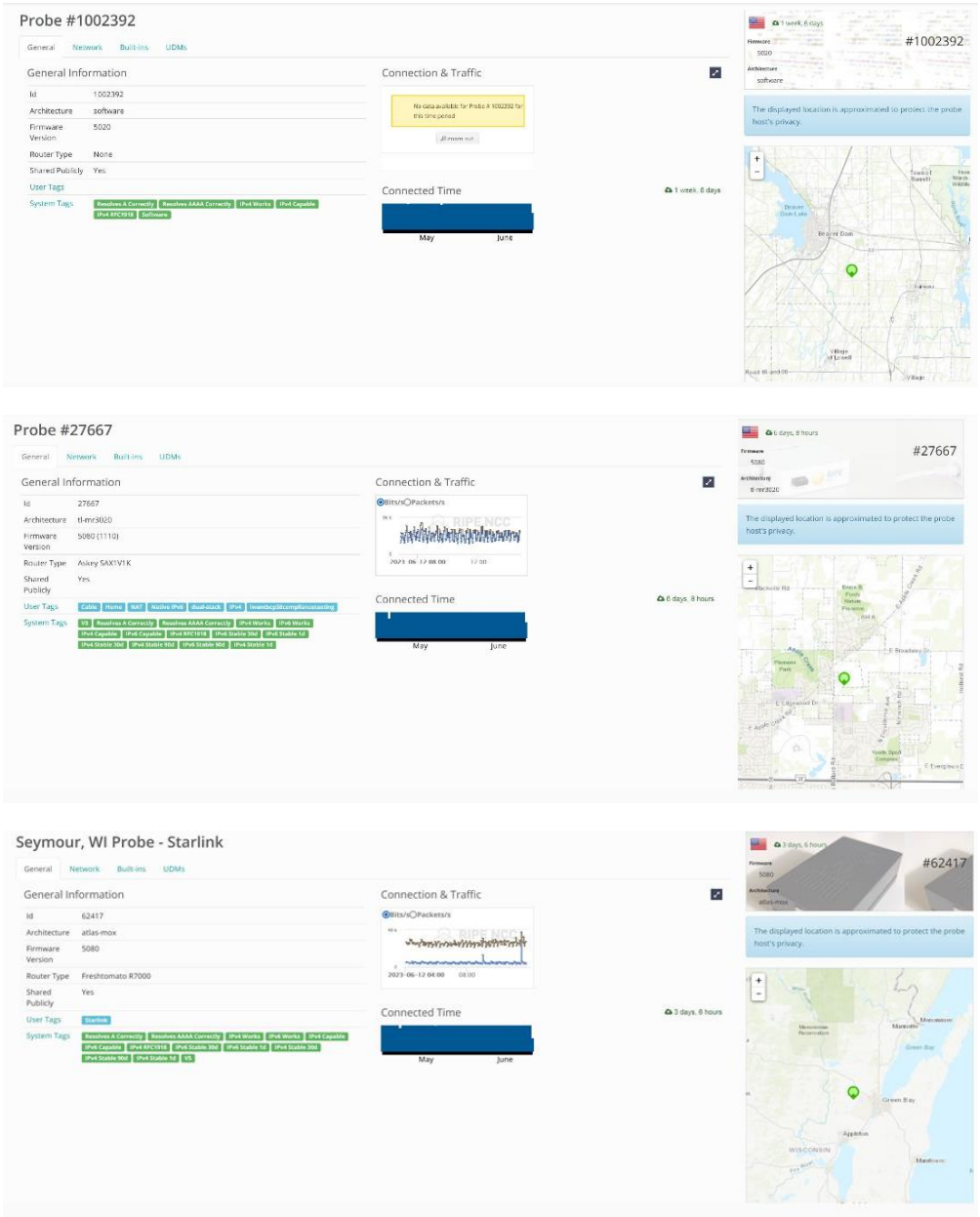
From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Monday, July 10, 2023 10:49 PM
To: Spectrum OP VP VP@charter.com>; SVP@charter.com; TestEngineer@charter.com
Subject: RE: [EXTERNAL] Time for some good news?
VP,
Ok, let's talk on the phone tomorrow when you know something and have something to offer me.
Lefty

While awaiting the phone call that did not come, I also went on exploring alternate testing methods, I came across RIPE Atlas a global, open, distributed Internet measurement platform, consisting of thousands of measurement devices that measure Internet connectivity in real time.

I see some probes in the upper Midwest.



And some relatively near me.



And I also came across ThousandEyes, Inc. now a part of Cisco.

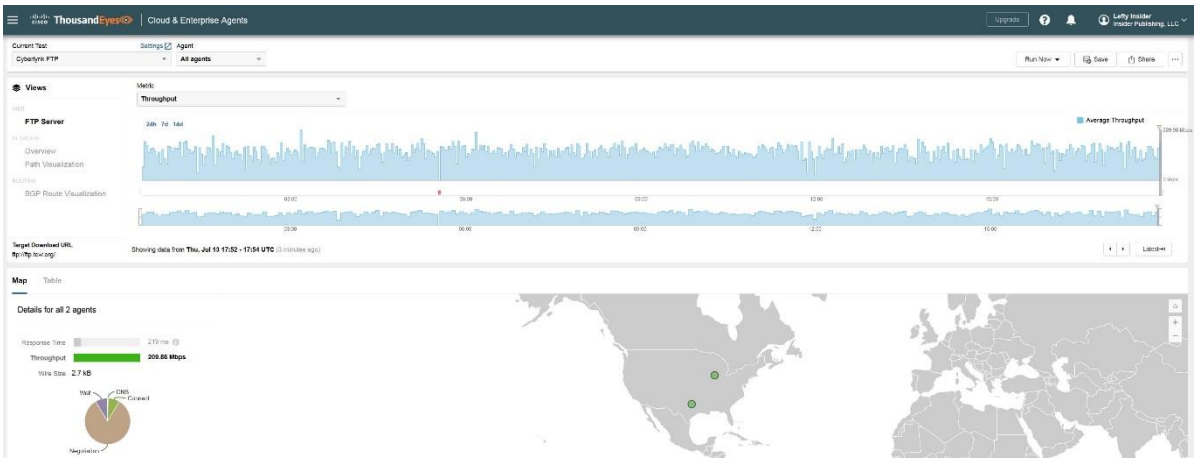
https://www.thousandeyes.com/

ThousandEyes works to deliver a common operational language for enterprises, application providers, and Internet service providers to come together to see, understand, and optimize connected experiences for every user, over any network

They have a trial web app for using in testing, and of course a much more comprehensive paid service.

This seems a bit like using shotgun to kill a fly.

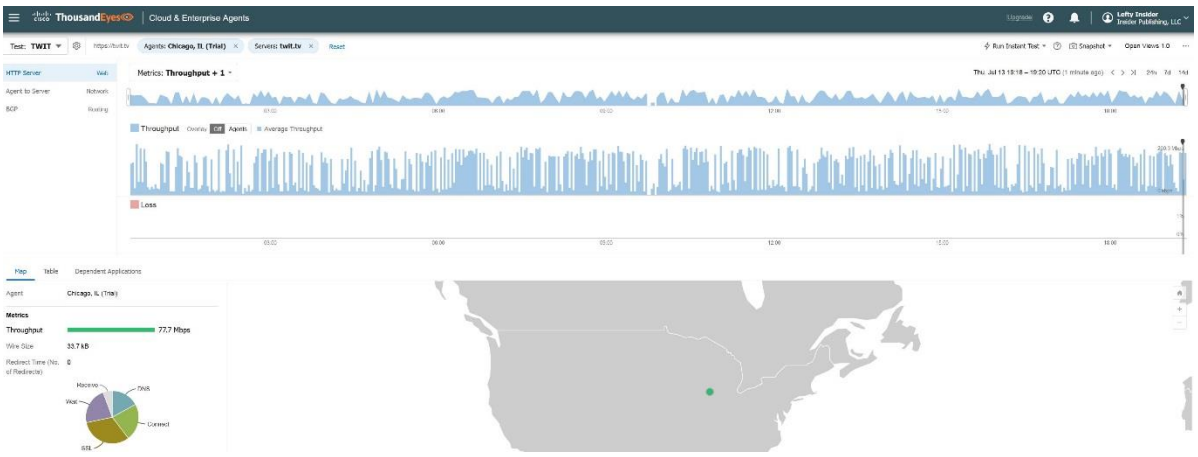
This is how ThousandEyes sees FTP from my webserver:



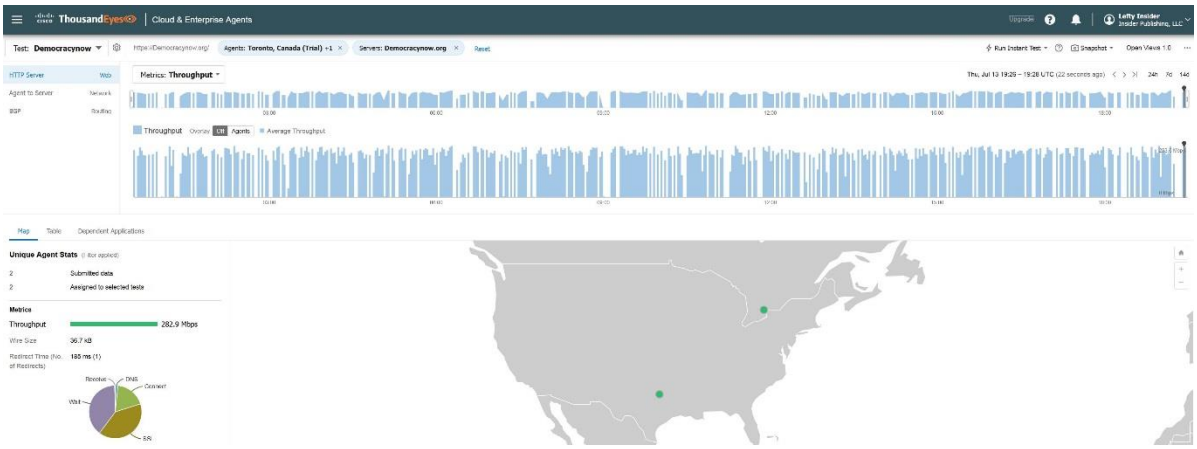
219ms response time and 210Mbps throughput from server agents in Chicago, Dallas, and Toronto.

HTTP response times ranging from 100ms to 300ms.

Throughput 78Mbps to Twit.tv.



Throughput 283Mbps to Democracynow.org from Dallas and Toronto agents.



Having a chat with TE tech support.

Chat Origin
Chat Started Thursday, July 13, 2023, 11:35:27 +1000: Tier 1 Omni
Agent Srivatsan Kasturi
Lefty Insider
11:35:27 AM
ThousandEyes: Hello , Im TEACH and Ill make sure that you get the help that you need today.
Which support option would you prefer?
Chat with an agent
Provided details as below
Preferred Name
Email - lefty@tcw.org
Case Number
Question Type- Configuring an alert, test, or report
Feature of interest - Reports & Dashboards
Severity - Severity 3 (Medium)
Problem Description - I have setup six tests. Can I see bandwidth on each of these connections? All I see now is response time and availability.
Srivatsan
11:35:27 AM Hello Lefty Insider, thank you for contacting ThousandEyes support. My name is , how may I help you?
11:35:53 AM
Hi Lefty. Are these agent to server tests?
Lefty Insider
11:36:12 AM Yes, I think so, first time user.
Srivatsan
11:37:13 AM are you able to share a screenshot of the view you are getting in the test views?
Lefty Insider
11:37:34 AM how?
11:38:18 AM
copy and paste into chat?

11:38:31 AM Main Menu
Srivatsan
11:39:01 AM
you can click the share button above and
11:39:10 AM that should generate a link
11:39:16 AM which i can view here
Lefty Insider
11:40:12 AM I don't see a share button in this chat window
Srivatsan
11:41:02 AM the share button is in the thousandeyes portal
Lefty Insider
11:41:49 AM Don't see it. here is the link to where I am at: https://app.thousandeyes.com/dashboard/?dashboardId=4-1487426
11:43:23 AM If I click on sharing and snapshots it does not work
11:44:17 AM You do not have any active snapshots. You can create one using the Share menu in most views.
Srivatsan
11:44:35 AM ok give me a few moments here
11:45:47 AM just out of curiousity in the test views screen , if you look at the metrics for the tests you have created, are you able to see the bandwidth measure there?
11:46:42 AM may i also have the name of one of the tests?
Lefty Insider
11:47:35 AM Youtube, Amazon, Netflix, Hulu threw a 406 error so they must not like your agent.
Srivatsan
11:47:54 AM :)
Lefty Insider
11:48:33 AM 406 from them must mean GFY
11:49:29 AM To answer your question however I see availability and response time only
Srivatsan
11:49:36 AM hmm may be they don't appreciate the header info coming in as thousandeyes
Lefty Insider
11:50:22 AM Is there an option menu where i can add bandwidth, this is a trial version
11:52:42 AM I thought that this was a simple yes or no question
Srivatsan
11:53:01 AM if it is configured as http server test, you should be able to tick the calculate throughput button in advanced settings
Lefty Insider
11:53:43 AM where is that please
Srivatsan
11:53:45 AM this is the same measure except that the actual flow to that web address is estimated in mbps and not the maximum pipe capacity
11:54:01 AM it is in the advanced settings in the http server test
11:54:45 AM you can refer to this for throughput metric: https://docs.thousandeyes.com/product-documentation/internet-and-wan-monitoring/tests/http-server-tests/using-the-http-server-view

Lefty Insider

11:55:31 AM I guess I am guilty of not RTFM

11:56:17 AM One more question, will these test run if I disconnect, or are they client dependant?

Srivatsan

11:58:53 AM Give me a few moments . I'm just checking something in the backend

12:01:27 PM ok just to confirm - there is a specific check box called: "perform bandwidth measurements" and "perform MTU mesaurments" in advanced settings of these teste

12:01:47 PM throughput is for other test types not this one

12:01:54 PM so this is pretty straightforward

Lefty Insider

12:03:19 PM I see it now. this interface reminds me of Lotus Notes, and that is not a compliment.

Srivatsan

12:03:22 PM also to answer your question, these are run by dedicated agents

12:03:44 PM so long as they are online and in the network, they will run these tests

12:04:04 PM you don't have to have an open session with them for them to run tests

12:04:14 PM lotus notes - that was terrible

12:04:30 PM i used to use them ages ago and it was nothing short of pain

Lefty Insider

12:04:50 PM Made everyone love Outlook

Srivatsan

12:05:11 PM yes i totally agree. may be that was a strategy!

Lefty Insider

12:05:35 PM I can handle from here buddy, thanks.

Srivatsan

12:05:46 PM Hopefully the GUI in the future will be a lot more outlookey

12:05:51 PM you are very welcome

12:06:08 PM nice chatting with you Lefty

Lefty Insider

12:06:29 PM Oops. "Cloud Agents are not supported for bandwidth measurements. Please disable bandwidth measurements or perform the bandwidth measurement from an Enterprise Agent."

Srivatsan

12:06:54 PM This is only supportable on Enterprise Agents

12:07:13 PM I should have let you know that . My apolgies

Lefty Insider

12:07:20 PM Can I do that in the trial?

Srivatsan

12:07:53 PM let me check this for you

12:09:39 PM yes you can instal Enterprise agents under trial accoubt

Lefty Insider

12:10:06 PM Enterprise Agents provide visibility from within your data centers, VPCs/VNETs, and branches. Test targets from inside your network.

Srivatsan

12:10:14 PM easiest way might be to download the OVA and install it on your machine if you have vmware workstation/ fusion

12:10:33 PM yes - thats the dedicated device that will keep running tests

12:10:37 PM so long as it is online

Lefty Insider
12:11:03 PM But I want to test outside my network not within
12:12:32 PM I guess that my answer is NO to bandwidth measuring
Srivatsan
12:12:33 PM I see. you can still deploy via azure ... or use the linux SSH method to deploy on your Ubuntu/ red hat VM from AWS
12:12:53 PM thats the only possible way i can think of
Lefty Insider
12:13:15 PM This is getting way over my head now. But thanks. See Ya

From: Cisco ThousandEyes [mailto: support@thousandeyes.com]
Sent: Thursday, July 13, 2023 7:22 PM
To: lefty@tcw.org
Subject: Support Case #S-CS-0730338: queries on bandwidth estimation and how to enable this
Hi Lefty,
We've updated support case #S-CS-0730338. The current status of the case is **Working**.
You can reply to this message or comment on the case here.
Thanks!
The Customer Success team at ThousandEyes.

Srivatsan Kasturi

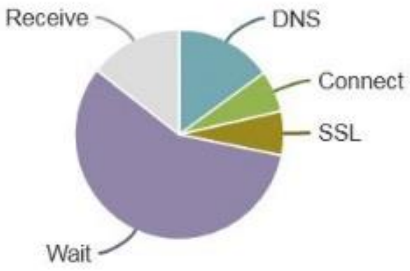
Fri Jul 14 00:21:30 GMT 2023
HI Lefty,
Hope you are well. Thank you for your time on the chat yesterday. As advised, in order to have the bandwidth calculated and displayed as a metric, the. " perform bandwidth measurements" and "perform MTU measurements" check box will need to be checked in the advanced settings on the test. Bandwidth measurements are not supported on the Cloud agents. Therefore, if you need to perform bandwidth estimations on the enterprise agents. You can install these agents in Azure in the cloud if you want to monitor from outside the org you can refer to this doc to see more info on azure deployments: https://docs.thousandeyes.com/product-documentation/global-vantage-points/enterprise-agents/installing/installing-enterprise-agents-with-microsoft-azure.
Please let us know if you have any further queries and need further assistance with this case
regards

ThousandEyes Inc. | 201 Mission Street, Suite 1700 | San Francisco, CA 94105 © 2020 ThousandEyes Inc. All rights reserved. Please do not remove this tag: [ref:_00DE0YgOr._5006Q2644X2:ref]

From: Lefty [mailto: lefty@tcw.org]
Sent: Friday, July 14, 2023 12:58 PM
To: 'Cisco ThousandEyes' <support@thousandeyes.com>
Subject: RE: Support Case #S-CS-0730338: queries on bandwidth estimation and how to enable this
Support,
Yes, I have deleted and recreated the two tests not reporting data and they now work.
I have discovered that the bandwidth measurement tests do not work with cloud agents.
However, what are the Throughput tests like this telling me?

Metrics

Throughput		11.7 Mbps
Wire Size	93.6 kB	
Redirect Time (No. of Redirects)	385 ms (0.33)	



Thanks,
Lefty

Hi Lefty,

We've updated support case #S-CS-0730813. The current status of the case is **Acknowledged**.

You can reply to this message or comment on the case here.

Thanks!
The Customer Success team at ThousandEyes.

Eman Osman

Tue Jul 18 21:39:19 GMT 2023
Hi Lefty,
Throughput is the total wire size divided by the receive. Here a bit of details from the HTTP server tests view guide:
https://docs.thousandeyes.com/product-documentation/internet-and-wan-monitoring/tests/http-server-tests/using-the-http-server-view#throughput
Thanks,
Eman | ThousandEyes Consulting Engineer

Hi Lefty,

We've updated support case #S-CS-0730338. The current status of the case is **Working**.

You can reply to this message or comment on the case here.

Thanks!
The Customer Success team at ThousandEyes.

Mon Jul 24 22:01:16 GMT 2023

Srivatsan Kasturi

Hi Lefty,

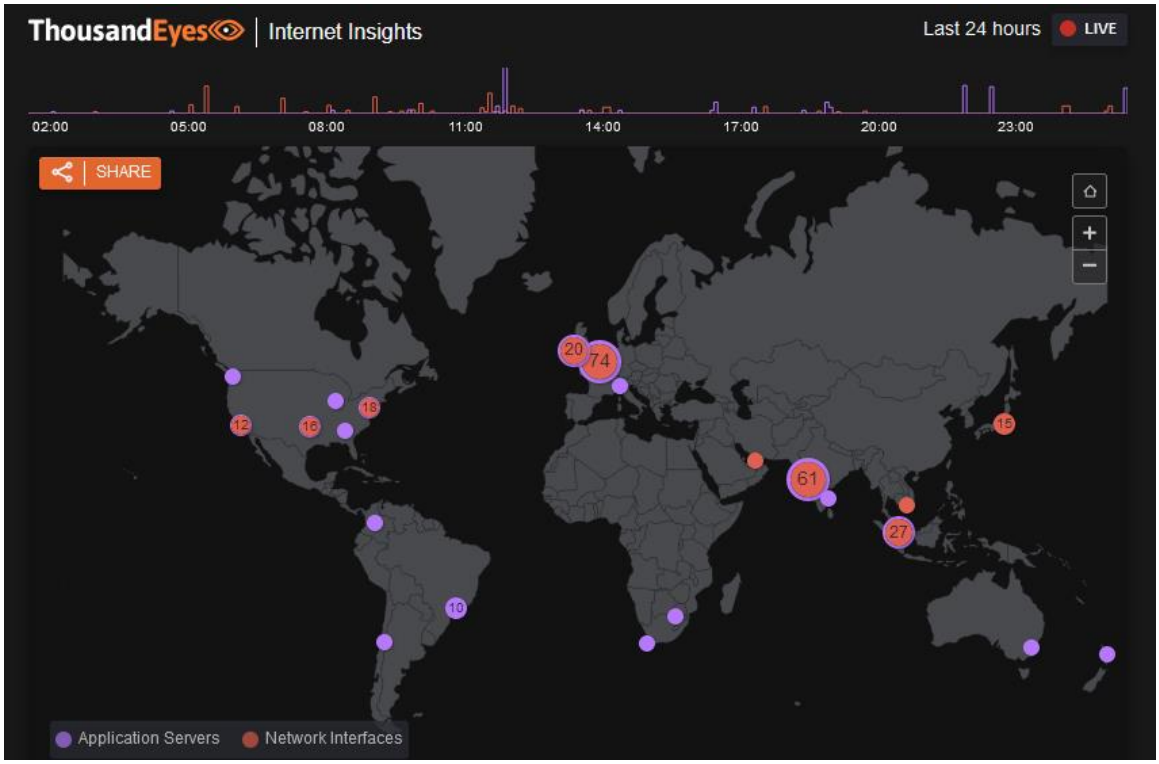
Hope you are well. I apologise for the delay here. Answering your question about throughput, - **this actually tells you the total amount of data that is actually traverses the path between the source agent and the target and actually arrives at the target. meaning if the bandwidth is the theoretical data transfer of the path, this one tells you how much data actually transfers across - measured in Mbps. for that test, in the test interval 11.5Mbps has been measured to be the throughput.**

Throughput (MB/s): The throughput, measured in megabytes per second. This is the Wire Size divided by the Receive Time.

Wire Size: The size of the object while in transmission. Often, HTTP responses are compressed prior to transmission, so wire size may be less than actual size if the object is compressed by the server.you can refer to the metrics and their definitions here: https://docs.thousandeyes.com/product-documentation/internet-and-wan-monitoring/tests/thousandeyes-metrics-what-do-your-results-mean

Please let me know if you need any further clarification

Regards



I also thought this was interesting. I showed this to the wife and told her that I was busy keeping the Internet up and running. https://www.thousandeyes.com/outages/

From: ThousandEyes Alert Notifier [mailto:alerts@thousandeyes.com]
Sent: Sunday, July 16, 2023 4:12 PM
To: lefty@tcw.org
Subject: Alert Triggered for Democracynow

ThousandEyes

Summary

1 End-to-End (Server) Alert

End-to-End (Server) Alert

Alert ID:	3348fb75-31b2-46f3-92ff-c1296b44f257
Test Name:	Democracynow
Server:	Democracynow.org:443
Alert Rule:	Default Network Alert Rule - Packet Loss ≥ 25%
No. of Agents:	3
Severity:	Info
Start Date:	*2 Minutes Ago* 2023-07-16 21:10:00 UTC

Agent	Metrics @ Alert Start
Dallas, TX (Trial)	Packet Loss: 74%
Chicago, IL (Trial)	Packet Loss: 86%
Toronto, Canada (Trial)	Packet Loss: 46%

Not sure just yet what this is saying about my correction, the agent connection, or the server itself.

Meanwhile, my attempt at hijacking this Spectrum Whitebox appears to have hit a snag.

Lefty Insider
6 Jul 2023, 20:10 BST
I have a Whitebox 9.0 that does not seem to be working. Is there a way I can get the newest firmware to reflash it?
thanks,
Lefty

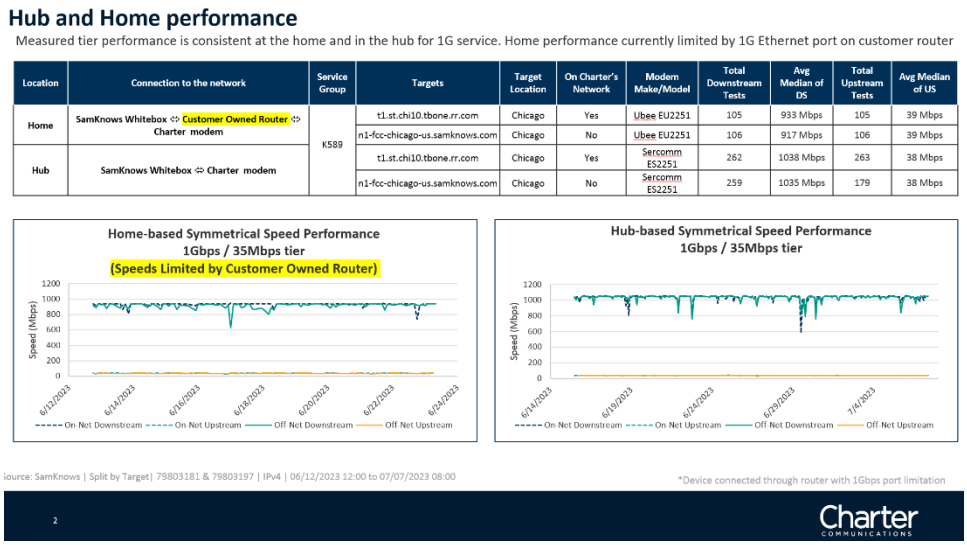
This email is a service from SamKnows. Delivered by Zendesk
##- Please type your reply above this line -##
Your request (60320) has been updated. To add additional comments, reply to this email.

Customer Support (SamKnows)
13 Jul 2023, 11:12 BST
Hi Lefty
Thank you for getting in touch.
I wasn't able to locate your email address on our system, please could you confirm the email address you signed up with so I can look into your request?
Thanks, Customer Support

From: Spectrum OP VP [mailto: VP@charter.com]
Sent: Friday, July 14, 2023 7:44 AM
To: Lefty Insider <lefty@tcw.org>
Subject: FW: [EXTERNAL] Pay for only what you get?
Hi,
I see you have not re-activated the SK device. Any progress on the request below? If you are not planning on using the SK device from Spectrum, I can send a tech to pick it up. Let me know if you have moved past this testing method.
I did want to share a summary of the test results we obtained while it was active on your router.
Let me know your thoughts and any additional plans on testing.
VP

It just makes me wonder why they want that Whitebox back so badly. There is no paperwork in it, no record of me agreeing to anything, or signing for it.

Maybe I should open it up to see what might be inside?



Hub and Home performance

Measured tier performance is consistent at the home and in the hub for 1G service. Home performance currently limited by 1G Ethernet port on customer router

Location	Connection to the network	Service Group	Targets	Target Location	On Charter's Network	Modem Make/Model	Total Downstream Tests	Avg Median of DS	Total Upstream Tests	Avg Median of US
Home	SamKnows Whitebox ⇔ Customer Owned Router ⇔ Charter modem	K589	t1.st.chi10.tbone.rr.com	Chicago	Yes	Ubee EU2251	105	933 Mbps	105	39 Mbps
			n1-fcc-chicago-us.samknows.com	Chicago	No	Ubee EU2251	106	917 Mbps	106	39 Mbps
Hub	SamKnows Whitebox ⇔ Charter modem		t1.st.chi10.tbone.rr.com	Chicago	Yes	Sercomm ES2251	262	1038 Mbps	263	38 Mbps
			n1-fcc-chicago-us.samknows.com	Chicago	No	Sercomm ES2251	259	1035 Mbps	179	38 Mbps

https://www.tcw.org/Charter Hub and Home based performance metrics v2.pdf

Makes me wonder what v1 of the PPT looked like. Perhaps it was missing the highlighted disingenuous snark that only a VP had the high priced expertise and experience to add.

Note: since they sent the actual .pptx file, rather than say a .pdf like I have linked above, I was able to see the original author (not the VP) and it being last saved by the VP. ID10TS.

Oh well, just another name for my emailing list, and I also picked up another one on an Out of Office message from a previous email message. It's not so much that I am cleaver as they are just plain dumb. I wonder if me getting a router with a 2.5 Gbps port would knock some of the snark out of him?

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Friday, July 14, 2023 12:42 PM
To: 'Spectrum OP VP' <VPOP@charter.com>; 'Senior VP' <SVP@charter.com>; ExecVP@charter.com; COO@charter.com; CTO@charter.com; ExecVP-NetOps@charter.com; TestEngineer@charter.com
Cc: datcphotline@wisconsin.gov; 'FCC' <consumercomplaints@fcc.gov>; antitrust@ftc.gov; aaron.romens@wisconsin.gov; regina.wade1@wisconsin.gov
Subject: RE: [EXTERNAL] Pay for only what you get?
VP,
I was awaiting your response to your requested information I have provided, and my specific testing requests.
"I previously understood the limitations with your existing SK corporate account and in sympathy for that is why I agreed to use this advice. I was not however aware at that time of how limited your data collection and/or sharing would end up being.
Since you have an existing business to business relationship with SK, creating a new SK account for my existing device, or creating a new account for a different WB 9.0 device will I believe have the same effect. Which is to allow me to run the standard SK tests against my (and many others in NE WI) existing connection practices.

Quality of Service measurements
Quality of Experience measurements
https://www.samknows.com/blog/testing-principles

Your attached PowerPoint is pretty, but not reflective of my Spectrum Internet connection activities. The servers you tested to: t1.st.chi10.tbone.rr.com ***and*** n1-fcc-chicago-us.samknows.com are not reflective of my, **or any other of your customers,** Internet connection experiences. I have no business at either of these servers, but I do have business at Netflix.com, Amazon.com, Hulu.com, Twit.tv, Tcw.org, and Stitcher.com etc.

Hell, your Charter test server: t1.st.chi10.tbone.rr.com does not even show up in my tracert path to Spectrum.com.

I can only conclude that this is some phony server that you have configured your routing tables to, as a way to ensure good observable performance . In other words, with all due respect, you are cheating. The only other possible senior is that this particular server does not respond to a tracert, or is out past 30 hops, but there would be no good reason for that in my view. All requests past the 16 that you see, time out.

Tracing route to Spectrum.com [142.136.81.136]
over a maximum of 30 hops:

1	2 ms	3 ms	2 ms	192.168.1.1
2	*	*	*	Request timed out.
3	11 ms	10 ms	10 ms	lag-63-10.dtr01twrvwi.netops.charter.com [96.34.23.212]
4	14 ms	16 ms	14 ms	lag-204.crr01stptwi.netops.charter.com [96.34.30.25]
5	19 ms	18 ms	17 ms	lag-400.crr01euclwi.netops.charter.com [96.34.24.83]
6	18 ms	17 ms	18 ms	lag-101.bbr01euclwi.netops.charter.com [96.34.1.20]
7	22 ms	23 ms	23 ms	lag-5.bbr02euclwi.netops.charter.com [96.34.0.7]
8	32 ms	32 ms	32 ms	lag-1.bbr01chcgil.netops.charter.com [96.34.0.9]
9	34 ms	34 ms	36 ms	lag-300.chcgildt87w-bcr00.netops.charter.com [66.109.1.18]
10	55 ms	54 ms	54 ms	lag-41.chctilwc00w-bcr00.netops.charter.com [66.109.0.229]
11	55 ms	54 ms	55 ms	lag-7.enwdcocd0aw-bar02.netops.charter.com [66.109.10.99]
12	54 ms	54 ms	53 ms	lag-6.enwdcocd0aw-bar03.netops.charter.com [66.109.10.101]
13	54 ms	54 ms	55 ms	24.27.226.55
14	55 ms	53 ms	57 ms	165-237-25-87.twcable.com [165.237.25.87]
15	74 ms	73 ms	78 ms	10.97.247.232
16	86 ms	87 ms	82 ms	165-237-25-177.twcable.com [165.237.25.177]

Trace complete.

Tracing route to t1.st.chi10.tbone.rr.com [209.18.33.166]

1	2 ms	1 ms	2 ms	192.168.1.1
2	*	*	*	Request timed out.
3	12 ms	11 ms	12 ms	lag-63-10.dtr01twrvwi.netops.charter.com [96.34.23.212]
4	14 ms	13 ms	14 ms	lag-204.crr01stptwi.netops.charter.com [96.34.30.25]
5	18 ms	18 ms	17 ms	lag-400.crr01euclwi.netops.charter.com [96.34.24.83]
6	39 ms	17 ms	18 ms	lag-100.bbr01euclwi.netops.charter.com [96.34.2.153]
7	24 ms	23 ms	23 ms	lag-5.bbr02euclwi.netops.charter.com [96.34.0.7]
8	32 ms	33 ms	37 ms	lag-1.bbr01chcgil.netops.charter.com [96.34.0.9]
9	*	*	*	Request timed out.
10	33 ms	33 ms	32 ms	lag-301.pr2.chi10.netops.charter.com [209.18.43.61]
11	31 ms	31 ms	31 ms	t1.st.chi10.tbone.rr.com [209.18.33.166]

Trace complete.

So only 11 hops rather than the more normal 16.

It does respond to a ping, so it is on an Internet connected system somewhere:
C:\Windows\system32>ping t1.st.chi10.tbone.rr.com
Pinging t1.st.chi10.tbone.rr.com [209.18.33.166] with 32 bytes of data:
Reply from 209.18.33.166: bytes=32 time=30ms TTL=54
Reply from 209.18.33.166: bytes=32 time=30ms TTL=54
Reply from 209.18.33.166: bytes=32 time=31ms TTL=54
Reply from 209.18.33.166: bytes=32 time=30ms TTL=54
Ping statistics for 209.18.33.166:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 30ms, Maximum = 31ms, Average = 30ms

A traceroute to your customer 24.240.62.10 in Sturgeon Bay, WI shows:
Tracing route to 024-240-062-010.res.spectrum.com [24.240.62.10]
over a maximum of 30 hops:

1	3 ms	3 ms	2 ms	192.168.1.1
2	*	*	*	Request timed out.
3	12 ms	11 ms	10 ms	lag-63-10.dtr01twrvwi.netops.charter.com [96.34.23.212]
4	12 ms	13 ms	12 ms	lag-203.dtr02jcptwi.netops.charter.com [96.34.22.185]
5	*	*	*	Request timed out.
6	25 ms	22 ms	23 ms	024-240-062-010.res.spectrum.com [24.240.62.10]

Trace complete.6 hops from me to them, but it basically jumps from the Two Rivers router 96.34.23.212 to the Sturgeon Bay router 96.34.22.185 to your residential customer router.

1. A traceroute to your residential customer 24.240.62.10 in New Holstein, WI, 24.240.122.49 shows the same path:
2. A traceroute to your business customer 24.240.120.210 in Rhinelander, WI, 24.240.122.49 shows eight hops via Two Rivers, Stevens Point and Naperville, Il to the customer:
3. A traceroute to your residential customer 24.240.94.0-255 down south in Janesville, WI shows seven hops via Two Rivers, Madison, and then to Janesville and the customer.

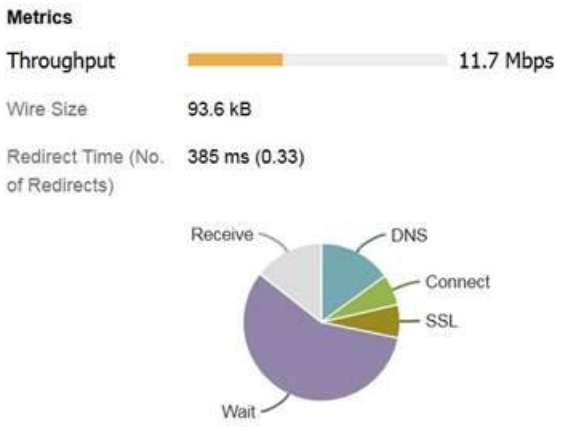
Traceroutes to other servers:

1. A traceroute to Tcw.org shows 12 hops, Two Rivers to Stevens Point to Fond du Lac to Milwaukee to Naperville, Il, to Franklin, WI
2. A traceroute to ftp.tcw.org shows the same path
3. A traceroute to mail.tcw.org shows the same path
4. A traceroute to Netflix.com shows 30 hops, Two Rivers to Stevens Point, to Eau Claire, to Minneapolis, to (MAE-EAST) Ashburn, VA. to (Amazon), Seattle, WA to six timeouts and to 52.93.28.190 (Amazon), Seattle, WA (timeouts on the last 12 hops) **This all seems quite odd to me.**
5. A traceroute to Amazon.com shows 25 hops, Two Rivers to Stevens Point, to Eau Claire to Minneapolis, to (MAE-EAST) Ashburn, VA. to (Amazon), Seattle, WA, back to (MAE-EAST) Ashburn, VA. to (Amazon), Seattle, WA, then eleven timeouts and then to Amazon at Ashburn, VA 52.94.236.248. **This all seems quite odd to me as well.**

6. A traceroute to Hulu.com shows 18 hops, Two Rivers to Madison, to Rochester, MN to Owatonna, MN to Grand Island, NE to Chicago, IL, and back to Grand Island, NE to Atlanta, GA to Portland, OR and finally to Akamai Seattle, WA. This seems like schizophrenic routing. Ping Pong anyone?
7. A traceroute to twit.tv shows 19 hops, Two Rivers to Stevens Point, to Eau Claire, to Chicago, IL, to Ashburn, VA to (Amazon) Dulles, VA (cloudfront.net)

Note: There does not seem to be any Akamai or Cloudflare CDN servers in these paths to streaming content except for Hulu.com.

The comment and highlighting in the PowerPoint, about my 1000Mbps router port being a limiting factor is disingenuous on two fronts. I am looking at only 400-500Mbps of actual results at best, not stretching the capabilities of the router at all, _*and*_ you and I both know that my Netgear Nighthawk XR1000 router _*far*_ exceeds the performance of _*any*_ router being supplied to customers by Charter.
Look at how sad my Netflix results are with a ThousandEyes test:



Can you really reject or dismiss all of the thousands of tests I have run in the past three years?
Are you afraid of what I will discover with my own SK Whitebox tests?
I thought we were going to cover this ground on a phone call two days ago?
I believe that a phone call would clarify any email misunderstandings.
More TE test results to follow,
Lefty

From: Spectrum OP VP [mailto: VP@charter.com]
Sent: Friday, July 14, 2023 12:56 PM
To: Lefty Insider <lefty@tcw.org>; 'Senior VP' <SVP@charter.com>; TestEngineer@charter.com
Subject: RE: [EXTERNAL] Pay for only what you get?
Lefty,
It looks like it is very difficult to move forward with a Charter sponsored option.
I assumed by your previous email that you wanted to acquire your one SK white box solution. Is this accurate? VP

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Friday, July 14, 2023 1:35 PM
To: 'Spectrum OP VP <VPOP@charter.com>; VPEngineering@charter.com
Subject: RE: [EXTERNAL] Pay for only what you get?
VP,
Yes, as I wrote previously I would like you to use your B-to-B connections with SK to procure for me a Whitebox 9.0 and an account for testing so that we can bring this three year old saga to an ending.
Thanks,
Lefty

From: 'Spectrum OP VP <VPOP@charter.com>;
Sent: Friday, July 14, 2023 2:50 PM
To: Lefty Insider <lefty@tcw.org>
Subject: Re: [EXTERNAL] Pay for only what you get?

I will see what we can do. The thread you sent to SK was confusing as to what you wanted to do.

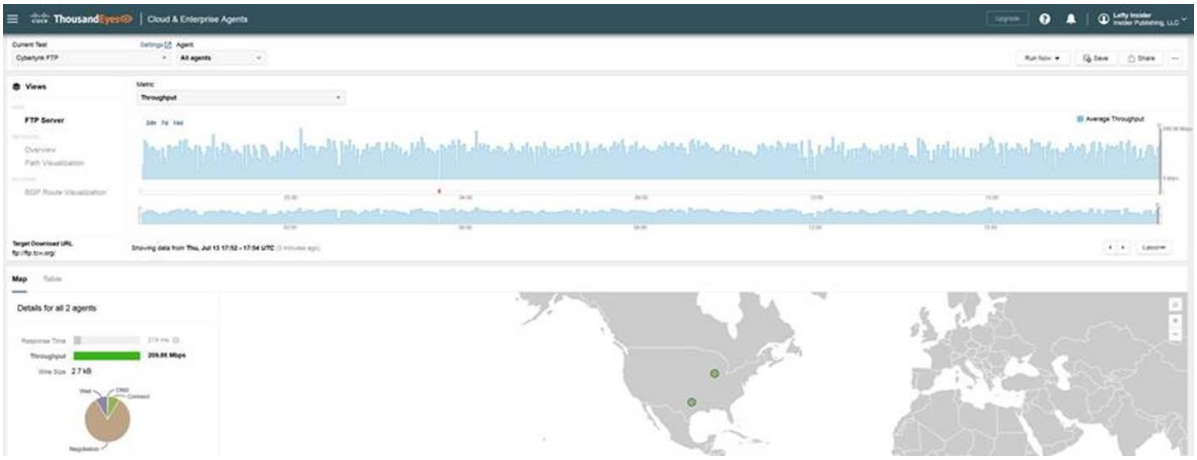
And then of course not will to leave well enough alone, I sent this:

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Friday, July 14, 2023 3:50 PM
To: 'Spectrum OP VP' <VPOP@charter.com>;SVP@charter.com; ExecVP@charter.com; COO@charter.com; CTO@charter.com; ExecVP-NetOps@charter.com; TestEngineer@charter.com; SDirINet Prod@charter.com
Cc: datcphotline@wisconsin.gov; spectrumchatsupportengineers@charter.com; 'FCC' <consumercomplaints@fcc.gov>; antitrust@ftc.gov; aaron.romens@wisconsin.gov; regina.wade1@wisconsin.gov
Subject: More advanced testing

OP VP,
This is more advanced testing from ThousandEyes. https://www.thousandeyes.com/

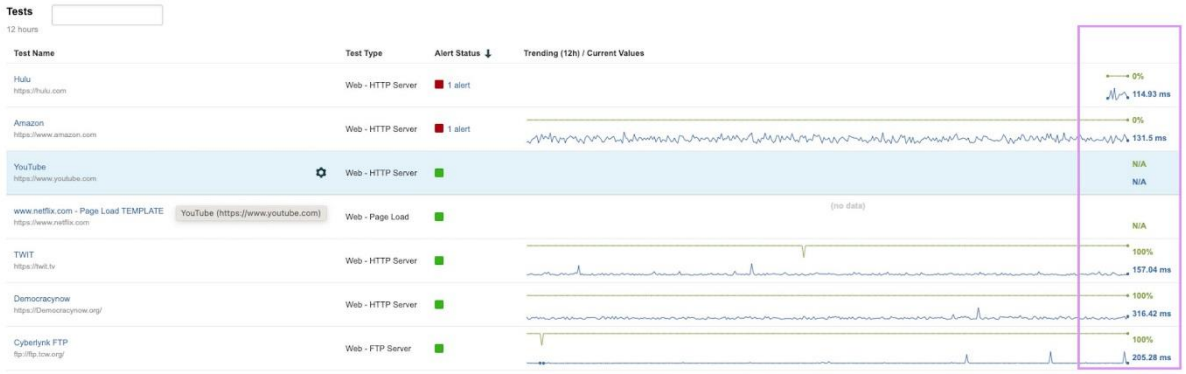
ThousandEyes works to deliver a common operational language for enterprises, application providers, and Internet service providers to come together to see, understand, and optimize connected experiences for every user, over any network

This is how ThousandEyes sees FTP from my webserver:



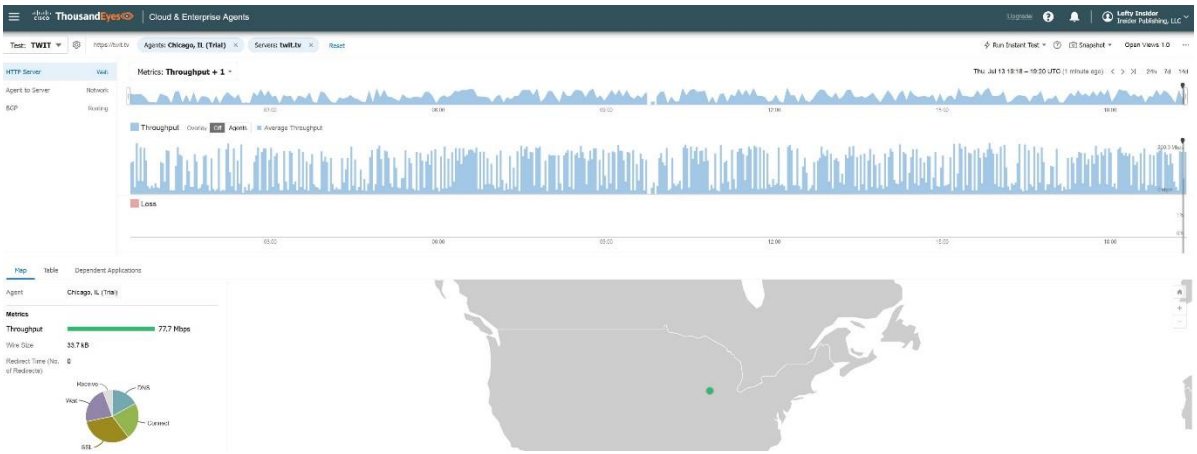
219ms response time and 210Mbps throughput from server agents in Chicago, Dallas, and Toronto.

This is how ThousandEyes sees response times from some streaming sites.

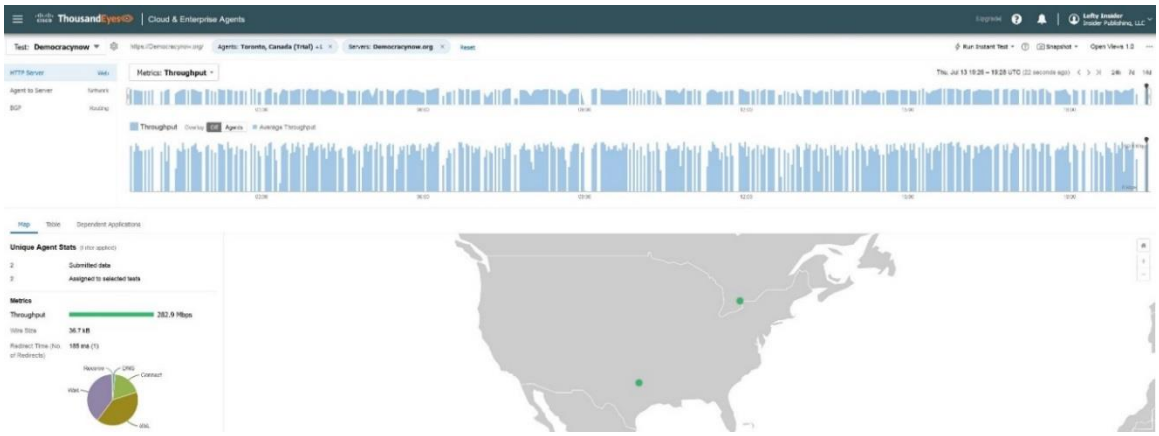


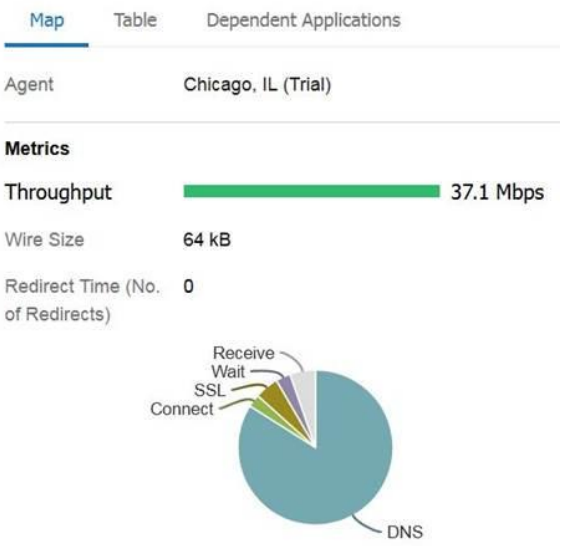
HTTP response times from 100ms to 300ms from server agents in Chicago, Dallas, and Toronto..

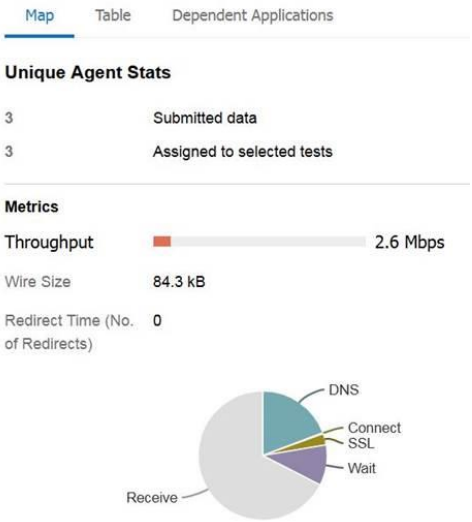
Throughput 78Mbps to Twit.tv. This could be why I am having trouble at this site.



Throughput 283Mbps to Democracynow.org from Dallas and Toronto agents.







Tcw.org throughput and response times **Youtube.com throughput and response times**

Life experience has taught me that sometimes no matter how much time you spend polishing a turd, in the end you still end up with just a shiny turd.
Lefty

Then there was this attempt by Spectrum at a blow off, and my pushback.

From: Spectrum OP VP [mailto: VPOP@charter.com]
Sent: Monday, July 17, 2023 1:12 PM
To: Lefty Insider <lefty@tcw.org>
Cc: SVP@charter.com>
Subject: RE: [EXTERNAL] More advanced testing
Mr. Insider,
I verified with the network team that we can't create a SK account on your behalf and be able to share the info across two different users.
If you want to have access to SK data from a device, you will need to volunteer for the SM MBA program and in this case you will be the only one to be able to see the data and will need to share with us. I understand that SK is looking for new volunteers so now may be a good opportunity to request to be part of the program.
I assume you are not planning to use the Spectrum SK device and would be happy to send a Tech or Tech Mgr Sup to retrieve it.
Let me know your thoughts.
VP

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Monday, July 17, 2023 1:40 PM
To: 'VP OP' <VPOP@charter.com>
Cc: 'SVP@charter.com>
Subject: RE: [EXTERNAL] More advanced testing

"If you want to have access to SK data from a device, you will need to volunteer for the SM MBA program and in this case you will be the only one to be able to see the data and will need to share with us. I understand that SK is looking for new volunteers so now may be a good opportunity to request to be part of the program."

Please provide phone contact info.
Thanks,
Lefty

Perhaps he thinks that I was born at night, but does not realize that it was not _last_ night.

From: Spectrum OP VP [mailto: VPOP@charter.com]
Sent: Monday, July 17, 2023 2:47 PM
To: Lefty Insider <lefty@tcw.org>
Cc: SVP@charter.com>
Subject: RE: [EXTERNAL] More advanced testing
Mr. Insider,
I think the best way it to volunteer is via the website below.
Volunteer Now - Measuring Broadband America
VP

Boy oh Boy, they really want pass the buck and get the Whitebox back, eh?

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Monday, July 17, 2023 4:17 PM
To: 'VP OP' <VPOP@charter.com>
Cc: 'SVP@charter.com>
Subject: RE: [EXTERNAL] More advanced testing
VP,
Been there, seen that.
That site is only for Canada. Lefty

From: Spectrum OP VP [mailto: VPOP@charter.com]
Sent: Monday, July 17, 2023 4:29 PM
To: Lefty Insider <lefty@tcw.org>
Cc: SVP@charter.com>
Subject: RE: [EXTERNAL] More advanced testing
Hmm. I just signed up with an address in Wisconsin. According to our SK team they just opened up volunteers for the USA again this week.

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Monday, July 17, 2023 6:27 PM
To: 'VP OP' <VPOP@charter.com>
Cc: 'SVP@charter.com>; TestEngineer@charter.com; SDirINet Prod@charter.com
Subject: RE: [EXTERNAL] More advanced testing
VP,
Ok, so it seems that they have just updated the website today, and I was able to sign up. I did signup twice for the Canada program in June/July, just in case.

"Now you're on our list, we'll check your details against our sample requirements."
Do you have any ideas what these requirements might be?

There does not seem to be an explanation, and are historically unresponsive to emails.

The FAQ refers to a sample plan which does not give much hope:
"The sample plan outlines which ISPs and speed tiers will be measured in each reporting year… the project measures the most popular speed tiers available from each ISP.
*We consider the most popular speed tiers to be the ones that have **80%** of an ISP's subscriber base on them - meaning the results are relevant to the largest base of people possible."*
OTOH, this sheds some hope:
*"Participants are selected to cover areas across the USA and ensure that we measure performance across a **variety of speed tiers** for each of the participating ISPs."*
In general however, this does not appear to bode well for me, due to my underpopulated rural geographic location, and my more uncommon 1000/40 plan.
So unless Spectrum can intervene on my behalf with a special request, I most likely will _*not*_ be selected.
Considering our history here, this does not seem to be asking for a lot after three years of my pro bono testing, equipment expenses, and email communications. My testing, unlike MBA, was was done at all hours of the day, not just a predictable peak hours.
Lefty

From: Spectrum VP [mailto: VP@charter.com]
Sent: Wednesday, July 19, 2023 7:27 AM
To: Lefty Insider <lefty@tcw.org>
Cc: 'SVP@charter.com>; TestEngineer@charter.com; SDirINet Prod@charter.com
Subject: RE: [EXTERNAL] More advanced testing
Lefty,
Unfortunately they are a bit of a black box on their white box selection criteria and I am not sure we have any influence on who they chose. Maybe now that gig is becoming more the norm, you may have a better shot at getting selected.
Also, I believe your service in 1G / 35 mbs. I think you indicated below that you had 1G / 40 mbs.
Now that you are on the path to getting your own box, any objections to James coming by to retrieve our SK box?
VP

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Wednesday, July 19, 2023 12:51 PM
To: 'Spectrum VP' VP@charter.com; SVP@charter.com; ExecVP@charter.com; COO@charter.com; CTO@charter.com;;ExecVP-NetOps@charter.com; tom.rutledge@charter.com; Rutledge. Thomas M@charter.com; escallation@charter.com; SVC_CCEDCharter@charter.com
Cc: TestEngineer@charter.com; SDirINet Prod@charter.com; engineers@charter.com
Subject: RE: [EXTERNAL] More advanced testing

"So unless Spectrum can intervene on my behalf with a special request, I most likely will _not_ be selected."

VP,
I guess that I was not asking for your opinion here, but was asking for Spectrum to take some definitive action.
This would be based on a good faith effort on your part, based on our long experience, and my increasing frustration.
What I am asking is for Spectrum to _*exert*_ some influence, by leveraging your existing relationships.

Writing that last email, made me think about the time and money I spent on this quest over the past three years.
The time I am sure is in the hundreds of hours, and it seems that the expenses I tracked at e-Bay, Amazon, and Newegg are also in the hundreds.

Internet Speedtesting Expenses	
2-JMT 3 Ports Hidden Inside USB 3.0 to Express card 54mm USB3.0 Adapter Converter for Express Card Laptop Notebook PC	92.32
NEW HP Advanced Docking Station +230W Adapter For HP Elitebook 8770w 8740w 8760w	49.99
Dual Band 1200M Wireless Intel 7260 7260HMW BT4.0 802.11ac Mini PCI-E Wi-Fi Card	14.99
Cisco Air-P121AG-A-K9 802.11 a/b/g low profile PCI adapter, New unopened box	25.00
Oxsubor SuperSpeed USB 3.0 Male to Female Extension Data Cable Left and Right Angle 2PCS	8.99
StarTech.com 2 Port Flush Mount ExpressCard 54mm SuperSpeed USB 3.0 Card Adapter	35.99
2-StarTech.com USB 3.0 to Gigabit Ethernet Adapter for Windows and Mac-10/100/1000 NIC Network Converter	47.40
NETGEAR 8-Port Gigabit Ethernet Plus Switch	53.99
3-Cable Matters 10Gbps Snagless Shielded Cat6A Ethernet Cable 20 ft	31.47
USB C to Ethernet 2.5G Adapter, QGeeM 4-in-1 USB C Hub to 4k Monitor,100W Power Delivery,2 USB 3.0 USB C Adapter	12.99
Cable Matters 10Gbps Snagless Long Shielded Cat6A Ethernet Cable 50 ft	17.99
2-USB WiFi 6 Adapter for PC, QGOO AX1800 USB 3.0 WiFi Dongle Dual Band 5Ghz/2.4Ghz High Gain Dual 5dBi Antennas 802.11ax MU-MIMO Wireless Network Adapter	62.38
UGREEN 2 Pack USB Extension Cable, (3 FT+ 3 FT) USB Extender USB 3.0 Extension Cable Nylon Braided	10.99
FebSmart Wireless-AC Dual Band 1200Mbps PCIE WiFi Card	19.99
StarTech.com USB 3.0 to Gigabit Ethernet Adapter	23.70
NETGEAR Nighthawk Pro Gaming AX5400 WiFi 6 Router (XR1000)	300.00
	808.18

I have just ordered a $600 router with a 2.5 Gbps WAN port to match the Spectrum modem port and the SK Whitebox port. I also ordered some Cat8 patch cables.

As you can read, I am very serious about this.
I am now waiting for Spectrum to show the same level of seriousness.
I can only imagine what it is about this testing request of mine that you are concerned about.
Transparency and commitment are the keys to a trusting customer,
Lefty

They really, really want their Whitebox back. I suspect that I will be holding it hostage until I get my SK Whitebox. I copied that last one to everyone except the gods of the Internet aka the Internet Elders. https://www.youtube.com/watch?v=iDbyYGrswtg

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Wednesday, July 19, 2023 3:44 PM
To: 'Spectrum VP' <VP@charter.com>
Subject: FW: [EXTERNAL] More advanced testing
VP,
As a PS to my previous email. If the availability of SK Whiteboxes is constrained due to supply chain issues or whatever, you could offer my existing one as a peace offering, so all I would need is account credentials.
If for some reason the firmware on this existing unit has been _*modified*_, I would be Ok with re-flashing it with the current SK firmware myself.
Lefty

From: Spectrum OP VP [mailto: VPOP@charter.com]
Sent: Friday, July 21, 2023 10:46 PM
To: Lefty Insider <lefty@tcw.org>
Cc: SVP@charter.com>
Subject: RE: [EXTERNAL] More advanced testing
Mr. Insider,
The Spectrum team that has the SK relationship has made the request. The SK team said this is a unique request and will need to evaluate this internally. Hopefully they will come to a conclusion on Monday as to whether they will entertain the request.
I will keep you posted. Have a good weekend.
VP

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Friday, July 21, 2023 12:11 PM
To: 'Spectrum VP' <VP@charter.com>
Subject: FW: [EXTERNAL] More advanced testing
VP,
This discussion will perhaps reveal how likely it is that I fit their test criteria and would be eligible to receive a Whitebox in the future.
Lefty

Meanwhile, things are not looking so great with SamKnows.

Lefty Insider

17 Jul 2023, 23:06 BST

"*Now you're on our list, we'll check your details against our sample requirements.*"
Hello,
Can you provide some clarity to this statement?
Is it geographic, or ISP related, or connection related/
The FAQ IRL, https://support.samknows.one/, throws a 404 error on the page it goes to after the signup.
Ok, wait I found it here:
https://www.measuringbroadbandamerica.com/program-faqs
Thanks,
Lefty

From: Halima Zaroual (SamKnows) [mailto:community@samknows.com]
Sent: Tuesday, July 18, 2023 5:45 AM
To: Lfty Insider <lefty@tcw.org>
Subject: [SamKnows] Re: Measuring Broadband America

##- Please type your reply above this line -##

Your request (60491) has been updated. To add additional comments, reply to this email.

Halima Zaroual (SamKnows)

18 Jul 2023, 11:45 BST

Hi Lefty,
Thank you for getting in touch about registering for a Whitebox. We really appreciate your interest in joining the Measuring Broadband America programme.
Please note that unfortunately not everyone who registers their interest in a Whitebox will be selected to receive one but we are always checking and updating the requirements of our sample plan so just sit tight! You can read more about our selection requirements and the project sample plan here.
If you are selected to host a Whitebox we will be in touch to let you know what you need to do next!
For further information you can have a look at our FAQ here.
Kind regards,
Halima
SamknowsFacebook
Instagram
Twitter
View our latest blog

Then a previous crafty attempt to pull a rabbit out of an empty hat appears to pay off.

From: Wesley Royer (Community Support) [mailto:support@samknows.zendesk.com]
Sent: Monday, July 24, 2023 7:59 AM
To: Lefty Insider <lefty@tcw.org>
Subject: [SamKnows] Re: Whitebox 9.0

##- Please type your reply above this line -##

Your request (60320) has been updated. To add additional comments, reply to this email.

Wesley Royer (SamKnows)
24 Jul 2023, 13:58 BST

Hello Lefty,
There was an issue with the original Whitebox 9s that were dispatched. If you would like to continue with this study will be more than happy to get a new box shipped to you this week? If you would please let me know what address I can ship it to.
Thanks,
SamKnows Team

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Tuesday, July 25, 2023 7:35 PM
To: 'Spectrum VP' <VP@charter.com>
Cc: 'Spectrum Senior VP' <SVP@charter.com>; ' TestEngineer@charter.com; SDirINet Prod@charter.com; engineers@charter.com spectrumchatsupportengineers@charter.com
Subject: RE: [EXTERNAL] More advanced testing
VP,
And the conclusion is?

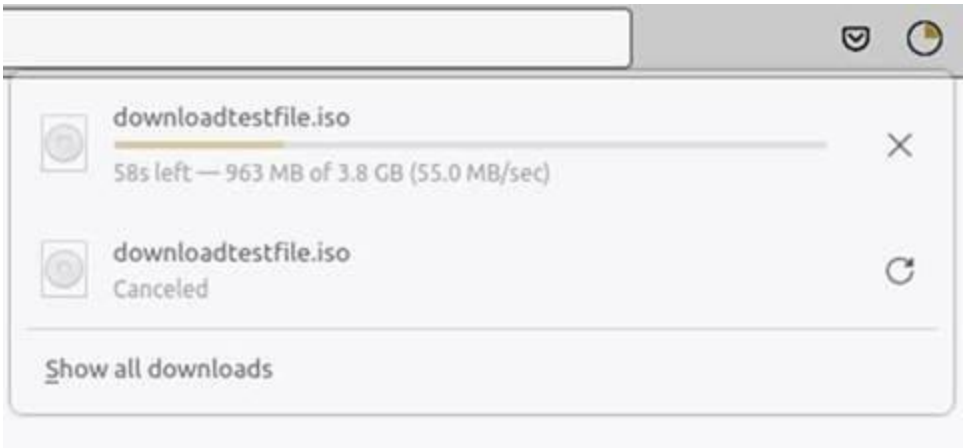
My new conclusion is:
Even after Speed test throwing out the lowest 30% of results, I cannot get close to your advertised speed. This with a new 2.4Gbps router and a new Linux Mint 21.2 Victoria Cinnamon Edition installation on fresh hardware.

And this on a more realistic set of speed tests.
The AM are the old router and the PM the new one from the same Linux machine.

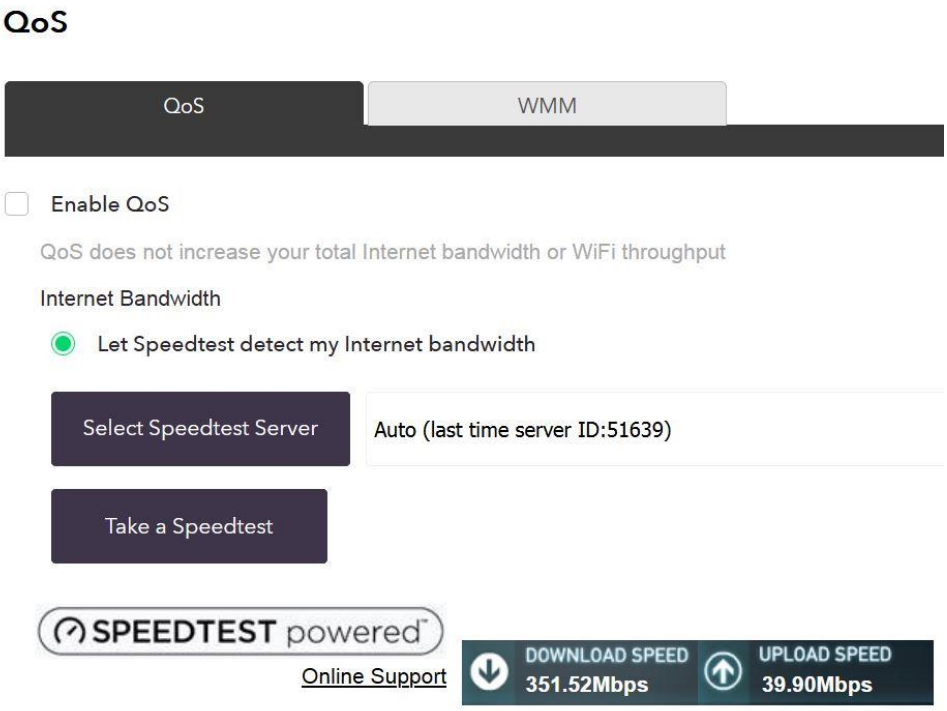
Time -5	Speed	Provider	Size	ConnectID		TestID
7/25/23 6:20:54 pm	275.2 Mbps 34.4 MB/s	Spectrum	76 MB	135006967522	US	Dgm3D0ZjD
7/25/23 6:20:37 pm	395.65 Mbps 49.46 MB/s	Spectrum	200 MB	135006967522	US	87fUVEIGI
7/25/23 6:20:19 pm	392.78 Mbps 49.1 MB/s	Spectrum	200 MB	135006967522	US	yWP8fC3a0
7/25/23 9:55:32 am	485.78 Mbps 60.72 MB/s	Spectrum	200 MB	658642493668	US	kHh2uNaBa
7/25/23 9:55:17 am	413.49 Mbps 51.69 MB/s	Spectrum	200 MB	658642493668	US	Bolcc06QO
7/25/23 9:54:52 am	304 Mbps 38 MB/s	Spectrum	200 MB	658642493668	US	UHNm8t2Me

On the good news front my download speeds increased with the Linux machine from 48 Mbps with Windows:

To 440 Mbps with Mint, although these are two different computers to two different download sites.



Then back on the bad news front, here is what the speed test looks like from my new router. "SPEEDTEST powered" it says.



Waiting to hear from you,
Lefty

From: Spectrum VP [mailto: VP@charter.com]
Sent: Wednesday, July 26, 2023 5:54 PM
To: Lefty Insider <lefty@tcw.org>
Cc: 'Spectrum Senior VP' <SVP@charter.com>; ' TestEngineer@charter.com; SDirINet Prod@charter.com; engineers@charter.com spectrumchatsupportengineers@charter.com
Subject: RE: [EXTERNAL] More advanced testing

Hi Mr. Insider,
We had heard back from the SK organization and they are not going to be able to include you in the next measurement project. They are not planning on measuring the 1G speed tier at this time based on the penetration rates for that speed tier.
Given this decision how do you want to proceed? We can certainly continue testing with our SK device if you would like. If you are not interested doing so I will send James to retrieve the device. Let me know what you would like to do.
VP

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Thursday, July 27, 2023 9:46 AM
To: 'Spectrum VP' VP@charter.com; SVP@charter.com; ExecVP@charter.com; COO@charter.com; CTO@charter.com;;ExecVP-NetOps@charter.com; tom.rutledge@charter.com; Rutledge. Thomas M@charter.com; escallation@charter.com; SVC_CCEDCharter@charter.com
Cc: TestEngineer@charter.com; SDirINet Prod@charter.com; engineers@charter.com
Subject: My Quest for SK Whitebox testing
Importance: High

"We had heard back from the SK organization and they are not going to be able to include you in the next measurement project. They are not planning on measuring the 1G speed tier at this time based on the penetration rates for that speed tier. "

Paul,
This is as I feared, and predicted.
So the data packets from the 2.5 Gbps port of your Spectrum/Hitron EN251 modem are currently being fed into a TP-Link multi-gigabit switch, joining the 2.5 Gbps port of my router for distribution across my 1Gbps network.
My offer here is that I will plug the SFP port of the SK Whitebox into a port of my 2.5 Gbps Ethernet switch, if you will run the following tests and provide access to the data.

Note that this represents a significant compromise on my part by not having my own account and running my own tests.
I would like to see probe traffic to and from the sites I actually use on a weekly if not daily basis like:

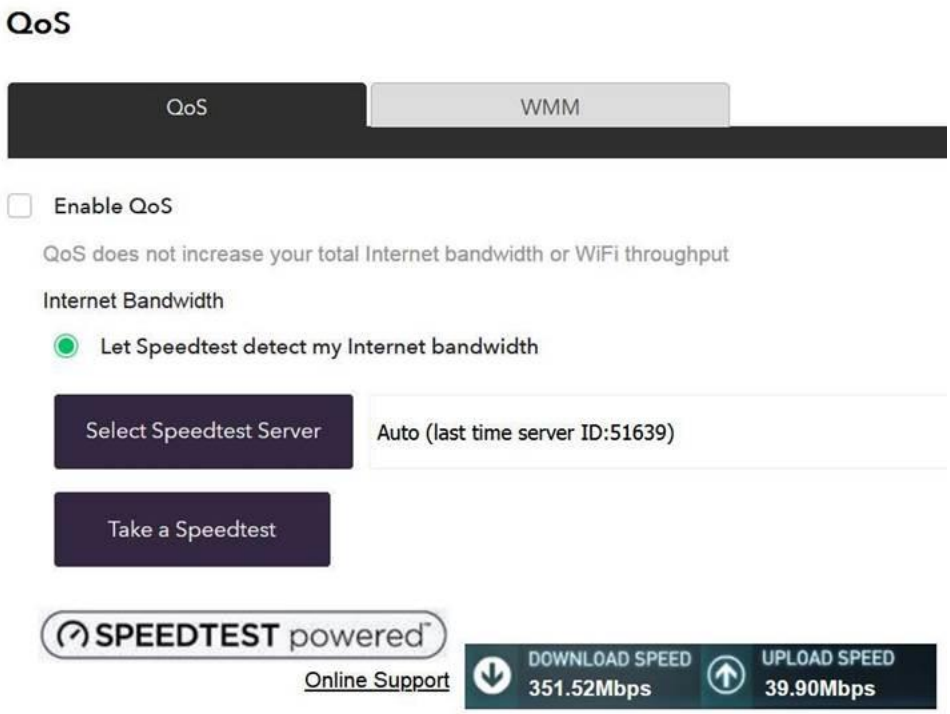
1. CyberLynk.net (tcw.org, ftp.tcw.org, mail.tcw.org)
2. Netflix (fast.com)
3. Prime Video (amazon.com)
4. YouTube (youtube.com)
5. Twit.tv
6. Wikipedia.org
7. Stitcher.com
8. Democracynow.org
9. TheIntercept.com
10. TheGuardian.com/us

Also perhaps some alternate speed test sites:
(https://fiber.google.com/speedtest/)
(http://speedtest.googlefiber.net/)
(https://www.highspeedinternet.com/tools/speed-test)
www.testmy.net

This will provide a more realistic or real-world analysis of my Internet connection.
Certainly your test engineers, Senior Director of Network Products, or your Director of Internet Products and SamKnows go-to guy, would be willing to handle this assignment for me.

Internet Speedtesting Expenses	
2-JMT 3 Ports Hidden Inside USB 3.0 to Express card 54mm USB3.0 Adapter Converter for Express Card Laptop Notebook PC	92.32
NEW HP Advanced Docking Station +230W Adapter For HP Elitebook 8770w 8740w 8760w	49.99
Dual Band 1200M Wireless Intel 7260 7260HMW BT4.0 802.11ac Mini PCI-E Wi-Fi Card	14.99
Cisco Air-P121AG-A-K9 802.11 a/b/g low profile PCI adapter, New unopened box	25.00
Oxsubor SuperSpeed USB 3.0 Male to Female Extension Data Cable Left and Right Angle 2PCS	8.99
StarTech.com 2 Port Flush Mount ExpressCard 54mm SuperSpeed USB 3.0 Card Adapter	35.99
2-StarTech.com USB 3.0 to Gigabit Ethernet Adapter for Windows and Mac-10/100/1000 NIC Network Converter	47.40
NETGEAR 8-Port Gigabit Ethernet Plus Switch	53.99
3-Cable Matters 10Gbps Snagless Shielded Cat6A Ethernet Cable 20 ft	31.47
USB C to Ethernet 2.5G Adapter, QGeeM 4-in-1 USB C Hub to 4k Monitor,100W Power Delivery,2 USB 3.0 USB C Adapter	12.99
Cable Matters 10Gbps Snagless Long Shielded Cat6A Ethernet Cable 50 ft	17.99
2-USB WiFi 6 Adapter for PC, QGOO AX1800 USB 3.0 WiFi Dongle Dual Band 5Ghz/2.4Ghz High Gain Dual 5dBi Antennas 802.11ax MU-MIMO Wireless Network Adapter	62.38
UGREEN 2 Pack USB Extension Cable, (3 FT+ 3 FT) USB Extender USB 3.0 Extension Cable Nylon Braided	10.99
FebSmart Wireless-AC Dual Band 1200Mbps PCIE WiFi Card	19.99
StarTech.com USB 3.0 to Gigabit Ethernet Adapter	23.70
NETGEAR Nighthawk Pro Gaming AX5400 WiFi 6 Router (XR1000)	300.00
Subtotal	**808.18**
Suplemental Expenses	
TP-Link TL-SG105-M2-5 Port Multi-Gigabit Unmanaged Network Switch	104.99
NETGEAR Nighthawk RAXE500 10800 Mbps Wireless Router(RAXE500-100NAS)	419.99
2-Cat8 Ethernet Cable, Outdoor&Indoor, 1.5FT Heavy Duty High Speed 26AWG Cat8 LAN Network Cable 40Gbps, 2000Mhz with Gold Plated RJ45 Connector, Weatherproof S/FTP UV Resistant for Router/Gaming/Modem	14.60
Total	**1,347.76**

Speed test from my new router. Note the "SPEEDTEST powered" claim.



I will await your decision.
Lefty

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Thursday, July 27, 2023 8:18 PM
To: 'Spectrum VP' VP@charter.com; SVP@charter.com; ExecVP@charter.com; COO@charter.com; CTO@charter.com;;ExecVP-NetOps@charter.com; tom.rutledge@charter.com; Rutledge. Thomas M@charter.com; escallation@charter.com; SVC_CCEDCharter@charter.com
Cc: TestEngineer@charter.com; SDirINet Prod@charter.com; engineers@charter.com; aaron.romens@wisconsin.gov; regina.wade1@wisconsin.gov; datcphotline@wisconsin.gov; 'FCC' <consumercomplaints@fcc.gov>
Subject: RE: [EXTERNAL] My Quest for SK Whitebox testing

"Unfortunately the selection of test sites is not an option with SK. We can offer additional testing using our SK device and the standard protocol designated by the SK organization"

VP,
So you have moved off your original position that you cannot do any additional testing beyond the two servers?
That said, I have no idea what those statements means. I need you to define that specifically into plain English language.

The SamKnows measurement suite tests QoS, QoE, in-home, and router performance with access to a suite of over 100 tests which can be tailor made to your needs – some of which include upload/download speeds, social media, video streaming, games tests, latency, loss and jitter.

https://samknows.com/blog/QOE-on-any-router

And of course, those tests include items on my list like Hulu, Netflix, YouTube, as well as web browsing and CDN testing as shown below.

"If you would like to do additional testing, I can have James assist in reinstalling the device ensuring it is connected per SK specifications."

Is that some kind of off-handed insult? Your non intellectually curious, some well-intentioned, yet ill equipped, and mostly clueless techs, all nine or so of them, will be keeping their hands off _my_ equipment. For the most part they are Cable TV guys. They understand megahertz but not megabits.

It is interesting to note that you have consistently ignored providing explanations or rationale for the many, many, test results (more than 2000 now) that I have provided you.
This is especially true with the newest results from my ***new*** router and ***new*** Linux computer.
There are and have been only two comingled issues here that we have been discussing. INTRANET performance and INTERNET performance.
All of these tests however boil down to two basic questions, and I will bold them here so that you do not continue to miss them.

1. **Why can't I get consistent advertised speeds on your local SPECTRUMNET speed tests?**
2. **Why can't I get consistent advertised speeds on THE INTERNET using _*any*_ speed test, anywhere? This includes HTTPS and FTP downloads.**

A legal remedy has recently been suggested to me by the WI DATCP. I am now considering this idea. This has never been in my mind before, as my goals have always been twofold:

- **Getting Spectrum to agree to provide me with the service that I _*am*_ paying for, or:**
- **Modify my monthly pricing to reflect the service that you _can_ actually provide.**

You have been proven wrong time and time again in your statements in this messaging for the past several months.
It is becoming apparent your statements are not honest mistakes, but rather contrived stalls and obfuscation.
On the surface this seems like a reasonable and simple quest, not one that should cause me to incur thousands in equipment costs, and many hundred hours of work in my fruitless testing.
Lefty

From: Spectrum VP [mailto: VP@charter.com]
Sent: Thursday, July 27, 2023 5:30 PM
To: Lefty Insider <lefty@tcw.org>
Cc: 'Spectrum Senior VP' <SVP@charter.com>; ' TestEngineer@charter.com; SDirINet Prod@charter.com; engineers@charter.com spectrumchatsupportengineers@charter.com
Subject: RE: [EXTERNAL] My Quest for SK Whitebox testing
Mr. Insider,
I also see you have a new question regarding your IP address. Can you provide some additional details as to the request?
VP

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Thursday, July 27, 2023 5:42 PM
To: 'Spectrum VP' VP@charter.com; SVP@charter.com
Cc: 'Spectrum Senior VP' <SVP@charter.com>; ' TestEngineer@charter.com; SDirINet Prod@charter.com; engineers@charter.com spectrumchatsupportengineers@charter.com
Subject: RE: [EXTERNAL] My Quest for SK Whitebox testing
VP,
When I installed the new router just recently, I did receive a new IP address on a 147.xxx.xxx.xxx subnet. Previously I was assigned on a 24.xxx.xxx.xxx subnet, (three addresses) and when I upgraded to 1000Mbps I was assigned on a 71.xxx.xxx.xxx subnet (two addresses).
I do not recall however asking a question about that, or anything else IP address related.
Lefty

From: Spectrum VP [mailto: VP@charter.com]
Sent: Friday, July 28, 2023 1:51 PM
To: Lefty Insider <lefty@tcw.org>
Cc: 'Spectrum Senior VP' <SVP@charter.com>; ' TestEngineer@charter.com; SDirINet Prod@charter.com; engineers@charter.com spectrumchatsupportengineers@charter.com
Subject: RE: [EXTERNAL] My Quest for SK Whitebox testing
Mr. Insider,
For web browsing, SK QoE tests do not measure speed to the site. They measure the time taken to download the HTML and referenced resources for the home page of each of the target websites, the number of bytes transferred, and the calculated rate per second. They test at the following websites, which are not customizable:

- http://www.bing.com/
- http://www.msn.com/
- http://www.bbc.com/
- http://www.ebay.com/
- http://www.m.imdb.com/help/
- http://www.google.com/policies/
- http://www.edition.cnn.com/
- http://www.apple.com/

There are additional tests for gaming speed and steaming video speeds which sites are determined variably based on demand for the gaming or streaming services.
I have also attached the Measuring Broadband America report if you would like to review that document for more detailed information about the methodology.
Please let me know if you would like to restart your testing using the SK device with the prescribed protocols.
VP

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Friday, July 28, 2023 4:42 PM
To: 'Spectrum VP' VP@charter.com; SVP@charter.com; ExecVP@charter.com; COO@charter.com; CTO@charter.com;;ExecVP-NetOps@charter.com; tom.rutledge@charter.com; Rutledge. Thomas M@charter.com; escallation@charter.com; SVC_CCEDCharter@charter.com
Cc: TestEngineer@charter.com; SDirINet Prod@charter.com; engineers@charter.com spectrumchatsupportengineers@charter.com aaron.romens@wisconsin.gov; regina.wade1@wisconsin.gov; datcphotline@wisconsin.gov; 'FCC' <consumercomplaints@fcc.gov>; 'FCC' <consumercomplaints@fcc.gov>; antitrust@ftc.gov
Subject: RE: [EXTERNAL] My Quest for SK Whitebox testing

So VP,
Your simplistic explanations are offensive to me. Of course a web browsing test is not a bandwidth test. I am really tiring of this month's long pedantic back and forth.

"Please let me know if you would like to restart your testing using the SK device with the prescribed protocols."
Again you need to explicitly explain to me (list) exactly what tests you are going to run and to where. And based on past experience, I will need to have this in writing to hold you to this.

1. Netflix, streaming test to x.com x 24 hours days, testing at one hour intervals
2. Hulu, streaming test to x.com x 24 hours days, testing at one hour intervals
3. Prime Video, streaming test to x.com x 24 hours days, testing at one hour intervals
4. CDN's, Akamai, Cloudflare, etc.
5. Etc.

I have read the 12th Measuring Broadband America (MBA) Fixed Broadband Report weeks ago and fully understand their (FCC/SK) testing protocols. In fact, this report information has guided my messaging to you for some time now. Below is my take, or read, critique of it.
I also understand that since Spectrum, under the corporate umbrella of the massive Charter Communications, Inc., is going to do this testing you do in fact have some leeway as to how you test and what you test to.

Note: *This MBA report may look rosy for the monopoly ISP's, at first blush, but note that most of this testing was done during peak usage hours of 7PM and 11PM local time* _only_. *This only for a small subset of the online population, in curated mostly high population centers. Although the test sever locations were not publically revealed, I do understand what cheating on the test means. This is like knowing exactly where, and what dates and times the police are going to setup radar speed traps Or perhaps someone is under a court ordered mandatory drug test, yet they are told the location, date and time of the next test.* ***I am sure that this point was negotiated with the FCC/MBA by your lobbyists, and forced down the throats of SamKnows.***
Remember the SamKnow vision statement is to***:*** **"Provide impartial and accurate data on how the Internet really performs so that everyone, everywhere, has access to better, more reliable internet services."** The SamKnows mission statement is to: **"Make the world a better place, one sweet megabit at a time".**
This testing measured only availability Quality of Service or QoS, and not application performance Quality of (user) Experience or QoE data from the approximately 5000 test probes that were used. This in a country of 125 million households, is a very small sample size (0.004%). I cannot imagine that _any_ data scientist would call this a representative or valid sample.
They also tested only the most common speed tiers (typically 300 Mbps) and in the highest population areas and then for only a limited time of 30 days in the Fall of 2021. The report also does not distinguish between Charter and Spectrum. It also make no mention of Rural America.

https://www.measuringbroadbandamerica.com/

Here we can see the FCC/MBA Upper Midwest testing areas in Detroit, Chicago and Minneapolis, but for the 6 million residents and 2.5 million households of Wisconsin, not so much.

So my overall take on this report is that the FCC/MBA testing game was and is, rigged. This is not unlike the fictitious FTC Form 477 broadband reports filed by ISP's each year lying about coverage areas and speeds delivered, which no one in or out of government believe. This is in fact is one reason for the creation of the MBA program in the first place. Another being to target Federal funding for Rural Broadband expansion, i.e. Corporate Welfare.

Once you run these tests over Flume[1], and Kafka[2] , I would like you to then export this data from the SK Google BigQuery[3] database. *"**You can choose where your data is stored to meet compliance and regulatory requirements"**.* **Or perhaps a customer request**. So take this database and dump it on a server somewhere where that I have login (read-only) credentials so that I can access this data via the SK dashboard or something similar. I don't want to view inscrutable screenshots, fancy PowerPoints, or csv dumps of this test data.

You have had this all your way to this point, and now these are my terms,

Lefty

1 Flume acts as the SK gateway for incoming data. It receives data over HTTP (over TLS), validates and authenticates it, and then publishes it on a Kafka topic.

2 Kafka is an event-streaming data store used to stream real-time measurement data and perform some transformations on it (such as splicing in metadata).

3 BigQuery is the data store that SamKnows uses for long-term storage of measurement data and metadata.

Note: This report may look rosy for the monopoly ISP's, but note that most of this testing was done during peak usage hours of 7PM and 11PM local time only. It measured availability QoS and not application performance QoE data from the approx. 5000 test probes that were used in a country of 125 million households. It also tested only the most common speed tiers and in the highest population areas for a limited time of 30 days in the Fall of 2021. The report also does not distinguish between Charter and Spectrum. It also make no mention of Rural America.

Well, so the response to this message was nothing but crickets. So of course I sent another one. Did I offend someone? Hopefully I did. If not then the following should accomplish this goal.

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Saturday, August 05, 2023
To: 'Spectrum VP' VP@charter.com; SVP@charter.com; ExecVP@charter.com; COO@charter.com; CTO@charter.com;;ExecVP-NetOps@charter.com; tom.rutledge@charter.com; Rutledge. Thomas M@charter.com; escallation@charter.com; SVC_CCEDCharter@charter.com
Cc: 'Spectrum Senior VP' <SVP@charter.com>; ' TestEngineer@charter.com; SDirINet Prod@charter.com; engineers@charter.com spectrumchatsupportengineers@charter.com;aaron.romens@wisconsin.gov; regina.wade1@wisconsin.gov; datcphotline@wisconsin.gov; 'FCC' <consumercomplaints@fcc.gov>; 'FCC' <consumercomplaints@fcc.gov>; antitrust@ftc.gov; nicole.raisbeck@wisconsin.gov; 'WI AG Josh Kaul' <josh.kaul@doj.state.wi.us>; ag@doj.state.wi.us; josh.kaul@wisconsin.gov; 'DOJ - Communications Office' <dojcommunications@doj.state.wi.us>; consumerprotection@doj.state.wi.us
Subject: My Continuing Quest for SK Whitebox testing
Importance: High

"I have also attached the Measuring Broadband America report if you would like to review that document for more detailed information about the methodology."

Charter/Spectrum VP Operations

The Measuring Broadband America **Technical-Appendix-fixed-2022.pdf** you just attached to your recent message is actually longer than the 12th Measuring Broadband America Fixed Broadband report, a very dry 55 pages, that I already read.

It is interesting that the main report quotes approx.. 5000 Whiteboxes deployed during the tests, however this 67 page Appendix mentions 2,750 volunteers recruited. Further reading reveals that the data for the study was collected and used from only 2,750 samples, for various reasons. This is 0.0022% of the 125 million US households.
These tests included 204 Charter customers, and 54 total units were deployed in Wisconsin. (0.00216% of 2.5 million households) How many of these were Charter/Spectrum, and not Comcast, Century Link, Frontier, TDS, etc. _and_ actually reported valid data that was used in the report is unknown based on the available info in this report. It also reports that for Charter, only the 200 and 400 speed tiers were tested.

- The Appendix also reveals that the methods of the testing were worked out in an _*open*_ meeting of the ISP's. That is a bit like going to an AA meeting and asking them when is a good time to be sobriety tested. As to the whole open meeting thing, when I was on the RUSD school board, some board committee's would meet in a small room on the second floor of the old Horlick Malt Company building. Even if citizens could somehow find the site to attend the meeting, the room was too small to accommodate more than a few people. So much for open.
- According to the Appendix, the download speed tests use eight concurrent TCP connections. This is not indicative of the way people, (your customers), use the Internet except for loading web pages, and these multiple connections can mask network congestion and misrepresent the actual speeds achieved.
- While the Appendix does explain how the WB software driven test are run automatically, however it also indicates that other tests may be run on the MBA panel.
  This is what I wish to do, or have you do for me.

- Automated download speed testing is explained as using the nearest server, based on latency, for both on-net and off net testing. Again, this is not indicative of the way people, (your customers), use the Internet.
- Testing times were not only limited to 7-11 PM as previously mentioned, but this particular report reveals that this was only Mondays through Fridays. No testing on the weekends when most people are home. Again, this is not indicative of the way people, (your customers), use the Internet.

This document reveals that the ISP's each signed a Code of Conduct agreeing that they won't _*game*_ the system. Yet that based on Charter's, and the rest of this industry in general, historical conduct it appears as valid as a MAGA republican politician honoring the same oath in 2023 that I took in 1972. **These are also the same companies with a long history of filing fictitious annual FCC Form 477 reports. This behavior is what necessitated the taxpayers incurring the costs of this FCC/MBA program in the first place to be able to accurately locate the correct target areas for supplemental Federal funding, i.e. taxpayer monies.**

Charter-Spectrum reaches $174.2 million settlement in New York ... *theverge.com › 2018 › 12 › 18 › 18146210 › charter-spectrum-174-million-settlement-new-york-state-attorney-general-internet-speeds*

> *December 18, 2018 - Charter Communications, the parent company of Spectrum, has agreed to a **$174.2 million settlement** with Attorney General Barbara Underwood, following the 2017 lawsuit that saw the AG's office sue the Internet provider over misleading internet speeds. The lawsuit, led by then-Attorney General Eric Schneiderman alleged that speeds were up to 80 percent slower than advertised. According to the New York Daily News, the $174.2 million payout will come in two forms:*

Charter CEO threatens lawsuit over New York's attempt to kick ... *theverge.com › 2018 › 8 › 1 › 17639976 › charter-threat-new-york-lawsuit-spectrum*

> *August 1, 2018 - **Charter** is willing to engage in a "lengthy" legal battle in **New York** over the Public Service Commission's vote to revoke its acquisition of Time Warner Cable.*

Charter-Spectrum reaches $174.2 million settlement in New York ... *theverge.com › 2018 › 12 › 18 › 18146210 › charter-spectrum-174-million-settlement-new-york-state-attorney-general-internet-speeds*

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Charter Must Pay $19 Million For Tricking Customers Into Switching ISPs (arstechnica.com)

> *A judge has ordered Charter Communications to pay $19.2 million to Windstream for lying to customers in order to trick them into switching from Windstream to Charter's Spectrum Internet service. Charter also faces a $5,279 penalty for shutting off service to hundreds of Windstream's resale customers. Ars Technica reports: When Windstream filed for bankruptcy in early 2019, Charter began a "literally false and intentionally misleading advertising campaign intended to create the impression, using mailings designed to seem as if they were coming from the Debtors [Windstream], that the Debtors were going out of business," said an order issued Thursday by Judge Robert Drain of US Bankruptcy Court for the Southern District of New York. Charter's goal with the mailings "was to induce the Debtors' customers to terminate their contracts and switch to Charter by sending them literally false and intentionally*

misleading information about the Debtors' bankruptcy cases and financial wherewithal," the ruling said. Charter premised its ad campaign "on false assertions regarding the Debtors' bankruptcy cases," the ruling said.
"We are gratified that Judge Drain's ruling means Charter will have to pay a significant price for its egregious false advertising," Windstream General Counsel Kristi Moody said. "Charter knew full well what it was doing when it embarked on a dishonest scare-tactic campaign to lure away our customers. At Windstream, we will always aggressively defend ourselves and our customers against predatory schemes and meritless allegations."

Charter CEO Tom Rutledge's Pay Rises to $38.8 Million in 2020
The exec's compensation at the U.S. cable and Internet giant rose sharply from $8.74 million in 2019.
https://www.hollywoodreporter.com/business/business-news/charter-ceo-tom-rutledges-pay-rises-to-38-8-million-in-2020-4146926/

Charter Charges More Money For Slower Internet On Streets With No Competition (arstechnica.com)

Posted by BeauHD on Friday May 28, 2021 @09:00AM from the confirming-what-we've-suspected-all-along dept.
An anonymous reader quotes a report from Ars Technica: [According to an article yesterday by Stop the Gap] Charter charges $20 more per month for slower speeds on the street where it faces no serious competition. When customers in two areas purchase the same speeds, the customer on the street without competition could have to pay $40 more per month and would have their promotional rates expire after only one year instead of two. [...] "Charter's offers are address-sensitive," Stop the Cap founder Phillip Dampier wrote. "The cable company knows its competition and almost exactly where those competitors offer service. That is why the company asks for your service address before it quotes you pricing."
Dampier found that Charter offers 200Mbps service for $50 a month "[i]n neighborhoods where Spectrum enjoys a broadband monopoly." Charter charges $70 for 400Mbps service in those same competition-free neighborhoods. But "[j]ust one street away, where Greenlight offers customers the option of gigabit speed over a fiber-to-the-home network, Spectrum's promotional prices are quite different," Dampier wrote. On the competitive street, Charter charges only $30 a month for the same 400Mbps service that costs $70 nearby. As previously noted, customers on the noncompetitive street have to pay $50 for 200Mbps. "Spectrum does not even bother offering new customers its entry-level 200Mbps plan in areas where it has significant fiber competition," Dampier noted, referring to the promotional offers that pop up when you type in an address. "For $20 less per month, you get double that speed." For gigabit-download service, Charter charges $90 a month on the competitive street versus $110 on the noncompetitive street. These are the base prices without fees and taxes.
Charter also offers to lock in the monthly rate for two years in the competitive area, compared to just one year in the noncompetitive area. And that's not all. Charter "charges a hefty $199.99 compulsory installation fee for gigabit service in noncompetitive neighborhoods. Where fiber competition exists, sometimes just a street away, that installation fee plummets to just $49.99," Dampier wrote. He added: "Note similar pricing variability exists in Spectrum service areas around the country, with the most aggressively priced offers reserved for addresses also served by a fiber-to-the-home provider or multiple competitors (e.g., cable company, phone company, Google Fiber or other [competitor]). Current customers typically have to cancel existing service and sign up as a new customer to get these prices." In a statement to Ars, Charter said that "Spectrum Internet retail prices, speeds, and features are consistent in each market -- regardless of the competitive environment." But, as Ars notes, "retail prices" are the standard rates customers pay after promotional rates expire. Stop the Cap showed that Charter's promotional rates vary between competitive and noncompetitive areas.
And the source article:
https://arstechnica.com/tech-policy/2021/05/charter-charges-more-money-for-slower-internet-on-streets-with-no-competition/

You May Be Paying Too Much for Your Internet
https://www.consumerreports.org/electronics-computers/telecom-services/you-may-be-paying-too-much-for-your-internet-a7157329937/

Striking Charter Workers Build ISP Where 'Profits Are Returned To Users' (arstechnica.com)

Charter Communications employees who have been on strike since 2017 are building an Internet service provider in New York City called "People's Choice." "People's Choice Communications is an employee-owned social enterprise launched by members of IBEW Local #3 to bridge the digital divide and help our neighbors get connected to the Internet during the COVID-19 pandemic," the ISP's website says. "We are the workers who built a large part of New York City's Internet infrastructure in the first place. We built out [Charter] Spectrum's cable system, until in 2017, the company pushed us out on strike by taking away our healthcare, retirement, and other benefits. It's now the longest strike in US history."

So far, People's Choice says it has completed rooftop antenna installations at two schools in the Bronx and installed "hardline connections to wireless access points connecting 121 units" at housing for survivors of domestic violence who have disabilities. A Gizmodo article said the system is equipped to offer minimum speeds of 25Mbps downstream and 3Mbps upstream, meeting a broadband standard that has been used by the Federal Communications Commission since 2015. "We have a big portion of most of the Bronx covered with our antenna," IBEW Local #3 steward Troy Walcott told Gizmodo. "Now we have to go building by building to let people know we're out there and start turning them on." "A few dozen Spectrum strikers have been actively involved in the installations, but Walcott expects that at least one hundred workers are waiting in the wings for the project to scale up," the Gizmodo article said. "We work in affordable housing, supportive housing, co-op housing, NYCHA [NYC Housing Authority], homeless shelters, and regular old apartment complexes," the webpage notes. You can fill out this form if you are interested in bringing broadband to your building.

"After we build out a network in your building, it transfers to cooperative ownership, so profits are returned to users," the People's Choice website says. "We are able to provide high-speed service in most cases for $10-$20/month. No more cable company ripping you off, and as an owner, you have a vote in policies like data privacy."

Report Finds Big Telecom Spends $230,000 on Lobbying Every Day: Telecom giants spent $234 million during the 116th Congress to ensure US broadband remained spotty, crappy, and expensive.
https://www.vice.com/en/article/88ndzv/report-finds-big-telecom-spends-dollar230000-on-lobbying-every-day?utm_source=reddit.com

Nationwide Study of US ISPs Finds Slower-than-Advertised Downloads and Inconsistent Pricing (msn.com) 38

Posted by EditorDavid on Saturday November 19, 2022 from the lowdown-on-downloads dept.

"Dear internet service providers of America: We're onto your tricks," writes Washington Post technology columnist Geoffrey A. Fowler: Last year, I encouraged Washington Post readers to participate in a major nationwide study of ISPs by uploading a copy of their monthly bills to Fight for Fair Internet, a project of Consumer Reports and other partners. Some 22,000 Americans did, and the results released Thursday reveal the many ways internet and cable companies get away with jacking up our bills.

For you and me, the study of big and small ISPs alike offers a clearer view of their worst behaviors — and how to fight back. The most important cost-saving lesson: Calling up and threatening to quit your internet service works. It's super annoying, I know, but Verizon (for example) applied discounts to 58 percent of the bills people submitted, with an astounding monthly median discount of $40.

The study's spotlight on ISP tricks, including bogus fees, data caps and wildly inconsistent pricing, also is fresh evidence that in many parts of the United States, there just isn't a

competitive market for internet service. Who would put up with it if there were? About 200 million people live in parts of the country with only one or two choices for reliable, fast internet, according to a 2021 report from the White House.
The report identified the U.S. internet providers charging the highest equipment rental fees (Wave Broadband) and the highest data-cap fees (Cox Communications), as well as the ones with the lowest and highest monthly service fees. But in addition, Consumer Reports notes that "Download speeds routinely fail to match the advertised 'up to' speeds of several ISPs. This was especially true of consumers paying for 'premium' plans purporting to offer download speeds of between 940 and 1,200 Mbps, who in fact experienced median speeds of between 360 and 373 Mbps."

The Washington Post highlights one case "Where you might pay more for less: AT&T" On volunteer bills, AT&T's median pricing across different speed plans was all over the map. People getting:

12 mbps paid $63.
45 mbps paid $80.
100 mbps paid $60.
1000 mbps paid $80.

Why should people who aren't even getting minimum broadband speeds (25 mbps) be paying more than people getting zippy service? ISPs can and will charge whatever they can get away with in your neighborhood.
"The charges on those bills may reflect older plans that we no longer sell," said AT&T spokesman Jim Kimberly. "Customers with older plans can check on our website or call in to see if a lower cost offer is available to them for faster speeds and switch service." That's another lesson for all of us: It's always worth checking to see if there's a new deal available. Unlike the cellphone carriers, ISPs rarely proactively switch consumers into cheaper or better plans.

Why Rural Americans Keep Waiting for Fast Internet, Despite Billions Spent (wsj.com)

Posted by msmash on Thursday June 16, 2022 from the closer-look dept.
The U.S. government has spent billions of dollars on several rounds of programs to upgrade internet speeds in rural areas over the past decade. Despite those efforts, many residents are still stuck with service that isn't fast enough to do video calls or stream movies -- speeds that most take for granted. From a report: Many communities have been targeted for broadband upgrades at least twice already, but flaws in the programs' design have left residents wanting. The Wall Street Journal analyzed 1.4 million largely rural census blocks that were included in a series of nationwide Federal Communications Commission broadband programs over the past decade. In the latest program, the Rural Digital Opportunity Fund, rolled out in 2020, internet service providers won rights to public funding in about 750,000 census blocks, covering every state except Alaska. The Journal's analysis found that more than half of those census blocks -- areas with a combined population of 5.3 million people -- had been fully or partially covered by at least one previous federal broadband program.
Most U.S. households today have access to internet download speeds of at least 100 megabits per second and upload speeds of 10 Mbps, according to government data. Although the FCC's programs have made progress, some rural Americans still can't get 4 Mbps download and 1 Mbps upload speeds -- the level of service that was the federal standard in 2011. The broadband saga around Heavener, Okla., illustrates some of the problems. Heavener, with a population of around 3,000, is surrounded by cattle pastures and forested hills. Today some buildings on the main streets have good broadband service, but the internet deteriorates outside town, residents say. Much of the area, in Le Flore County, was slated for upgrades under the Rural Digital Opportunity Fund in 2020 -- and some of those areas had already been part of prior programs.

Charter Raises Base Internet To $80 a Month; Price Hikes To Hit 9.5M Users (arstechnica.com)

Posted by msmash on Tuesday November 01, 2022 from the tough-luck dept.

Charter is raising prices on Spectrum home Internet service by $5 a month starting today, a company spokesperson confirmed to Ars. Standalone broadband prices are rising to $79.99 a month for 300Mbps download speeds, $99.99 a month for 500Mbps, and $119.99 a month for 1Gbps. 300Mbps is the advertised download speed for Charter's entry-level tier. From a report: The price increase takes effect today in most of Charter's 41-state territory, the company said. It affects broadband-only customers and broadband users who also subscribe to a Spectrum streaming TV package, but not cable TV customers. "The price for Spectrum Internet reflects the cost of delivering the best value in broadband for your family: 300Mbps starting speeds with no modem fees, data caps or contracts," the company said. Charter also said this is its first price increase on standalone broadband since December 2020. Customers currently on a promotional rate will keep paying that rate until the promotion expires. They'll pay the new, higher regular rate after that.

By way of comparison:

- Verizon FiOS Gigabit 940/880 Mbps speeds $69.99 /mo.
- AT&T Internet 1000 940/880Mbps $60 /mo.
- Gigabit Internet by XFINITY from Comcast 1 Gbps/35 Mbps $70.00 /mo.

Telecom Giants Head To Court To Kill NY State's Demand They Give Poor People $15 Broadband (techdirt.com) 57

Posted by msmash on Friday January 20, 2023 from the new-lows dept.

Karl Bode, reporting for TechDirt: Recently, New York State passed a new law demanding that regional broadband providers (Verizon, Charter Spectrum, and Altice) provide low-income consumers $15, 25 Mbps broadband tiers to help them survive COVID. The goal: to try and help struggling Americans afford the high cost of broadband during an historic health crisis. Under the proposal ISPs are also allowed to offer $20, 200 Mbps tiers, with any price increases capped at two percent per year. U.S. Regulators engaging in anything even close to price regulation of regional monopolies is, again, said monopolies' worst nightmare.

As a result, the broadband industry quickly sued New York, insisting that the state is forbidden from passing such a law thanks in part to the Trump administration's net neutrality repeal (which basically attempted to lobotomize state consumer protection authority in addition to killing popular net neutrality rules). As the case heads to court, it could have broader implications for other state efforts to mandate lower costs for consumers (in times of crisis or not): "The industry fear is that other states might impose requirements far more onerous than what New York requires, such as by further lowering the price, raising the speed requirements, or expanding the eligibility pool to make broadband affordable for middle-class customers," added Levin.

Comcast Complains To FCC That Listing All of Its Monthly Fees is Too Hard (arstechnica.com) 47

Posted by msmash on Wednesday June 14, 2023 from the how-about-that dept.

mschaffer shares a report: Comcast and other ISPs have annoyed customers for many years by advertising low prices and then charging much bigger monthly bills by tacking on a variety of fees. While some of these fees are related to government-issued requirements and others are not, poorly trained customer service reps have been known to falsely tell customers that fees created by Comcast are mandated by the government. The FCC rules will force ISPs to accurately describe fees in labels given to customers, but Comcast said it wants the FCC to rescind a requirement related to "fees that ISPs may, but are not obligated to, pass through to customers." These include state Universal Service fees and other local fees. As Comcast makes clear, it isn't required to pass these costs on to customers in the form of separate fees. Comcast could stop charging the fees and raise its advertised prices by the corresponding

amount to more accurately convey its actual prices to customers. Instead, Comcast wants the FCC to change the rule so that it can continue charging the fees without itemizing them..
I suppose it's just easier to grab people's money than it is to make up names for the fees, Mschaffer adds.

AT&T Lobbies Against Nationwide Fiber, Says 10Mbps Uploads Are Good Enough (arstechnica.com)

Posted by BeauHD on Monday March 29, 2021 from the don't-fight-it-embrace-it dept.
AT&T is lobbying against proposals to subsidize fiber-to-the-home deployment across the U.S., arguing that rural people do not need fiber and should be satisfied with Internet service that provides only 10Mbps upload speeds. Ars Technica reports: AT&T Executive VP Joan Marsh detailed the company's stance Friday in a blog post titled "Defining Broadband For the 21st Century." AT&T's preferred definition of 21st-century broadband could be met with wireless technology or AT&T's VDSL, a 14-year-old system that brings fiber to neighborhoods but uses copper telephone wires for the final connections into each home.
"There would be significant additional cost to deploy fiber to virtually every home and small business in the country, when at present there is no compelling evidence that those expenditures are justified over the service quality of a 50/10 or 100/20Mbps product," AT&T wrote. (That would be 50Mbps download speeds with 10Mbps upload speeds or 100Mbps downloads with 20Mbps uploads.) AT&T said that "overbuilding" areas that already have acceptable speeds "would needlessly devalue private investment and waste broadband-directed dollars." "Overbuilding" is what the broadband industry calls one ISP building in an area already served by another ISP, whereas Internet users desperate for cheaper, faster, and more reliable service call that "broadband competition."

Americans Hate ISPs Almost As Much As They Hate Gas Stations, Survey Finds (extremetech.com)

Posted by BeauHD on Monday June 26, 2023 from the you-don't-say dept.
An anonymous reader quotes a report from ExtremeTech: Americans hate their internet service providers (ISPs) more than any other segment of the consumer economy -- except gas stations. A fresh set of rankings from the American Consumer Satisfaction Index (ACSI) reveals that few consumers are happy with the way their ISPs conduct business, preferring them only over trips to the pump in a list of 43 major industries. The rankings come courtesy of the ACSI's most recent telecommunications study, which the organization publishes annually. The study covers subscription TV services, video streaming services, and ISPs of both the fiber and non-fiber variety. Using interviews with 22,061 American consumers conducted between April 2022 and March 2023, this year's telecommunications study investigates just how happy people are with their ISPs, then pits that data against that of several other industries. This year, ISPs ranked lower than the endlessly frustrating automobile, banking, and health insurance industries, as well as 39 others that people tend to have an easier time with, such as breweries and athletic shoes.
On a satisfaction scale of 1 to 100, ISPs earned a lackluster 68, which consists of fiber's 75-point and non-fiber's 66-point satisfaction scores combined. The ACSI used customers' input on a number of experiential data points, from choosing a plan to actually using their home Wi-Fi networks, to calculate both scores and combine them based on usage. Although fiber customers found their internet to be relatively reliable and their bills easy to understand, earning an 80 in both categories, non-fiber customers weren't as impressed at 72 and 75, respectively. Unsurprisingly, both fiber and non-fiber customers enjoyed reaching out to their providers' customer service teams the least out of 14 total data points.
There was only one industry that ranked lower than ISPs. As much as Americans generally dislike the way ISPs manage hardware, pricing, customer service, outages, and more, they dislike gas stations even more, giving the category a measly score of 65. While the ACSI doesn't share respondents' reasoning (it's a telecommunications study, after all), it's easy to see why consumers might not enjoy spending obscene money to fill their tanks at dusty roadside stops.

US Ranks 32nd Worldwide On Broadband Affordability, Study Finds (techdirt.com) 46

Posted by BeauHD on Wednesday July 12, 2023 from the nothing-to-brag-about dept.

An anonymous reader quotes a report from Techdirt: One recent study found that the U.S. was currently ranked somewhere around 32nd globally, behind countries like Russia, Lithuania, and Bulgaria [on broadband affordability] (you can find the full breakdown here): "The United States and Canada both have one of the highest internet costs," Alex Tofts, the Broadband Expert for Broadband Genie, said in a summary. ***"It's driven by a lack of competition and bigger distances to connect, with lower population density than other developed countries.*** *However, both have average wages in the top fifteen in the world, compensating for the high cost of internet."*

For decades, people (mostly the industry) tried to suggest the problem was because America was just so gosh darn big. But you'll notice that China and Russia, (ranked 25th and 17th, respectively) still perform better. Data routinely shows that affordability is the key obstacle to access, yet it's only been in the last few years that you've started to see this reality reflected in U.S. policymaking. [...] But again, the cause of this problem is very clear: monopolization and consolidation, protected by corruption. Few U.S. markets have the choice of more than one broadband provider at next-generation speeds. ***And that's because federal and state lawmakers are so comically corrupt, they routinely let AT&T, Comcast, Charter, or Verizon lobbyists endlessly merge, crush all competition, then literally write state or federal legislation and policy over several decades.***

But it's not all doom and gloom. Decades of federal policy corruption and dysfunction have created an extremely strong, local, bipartisan grassroots movement for better broadband access. In countless towns and cities, municipalities, cooperatives, city-owned utilities, and creative new partnerships are building new, open access fiber networks with an eye on competition and cost. [...] Still, it's comical and grotesque that it's 2023 and a country that fancies itself a technology giant still can't meaningfully tackle equitable broadband access and affordability. And that telecom and media policy has basically become a boring afterthought in the era of "Big Tech." Ensuring equitable access to an essential utility is just too boring for most 2023 policy circles, much less the modern attention economy.

FCC Chair: Speed Standard of 25Mbps Down, 3Mbps Up Isn't Good Enough Anymore 109

Posted by msmash on Tuesday July 25, 2023 @09:54PM from the moving-forward dept.

Chairwoman Jessica Rosenworcel of the Federal Communications Commission proposes a new broadband standard of ***100Mbps downloads and 20Mbps uploads****, replacing the 2015's 25Mbps/3Mbps metric. From a report: "In today's world, everyone needs access to affordable, high-speed Internet, no exceptions," Rosenworcel said in the announcement today. "It's time to connect everyone, everywhere. Anything short of 100 percent is just not good enough." Section 706 of the Telecommunications Act requires the FCC to determine whether broadband is being deployed "on a reasonable and timely basis" to all Americans. If the answer is no, the US law says the FCC must "take immediate action to accelerate deployment of such capability by removing barriers to infrastructure investment and by promoting competition in the telecommunications market."*

The FCC's previous Section 706 reports analyzed availability and included data on adoption but didn't consider affordability. In her announcement today, Rosenworcel said she "recently shared with her colleagues an updated Notice of Inquiry that would kick off the agency's evaluation of the state of broadband across the country, as required by Section 706 of the Telecommunications Act. Chairwoman Rosenworcel proposes that the Commission consider several crucial characteristics of broadband deployment, including affordability, adoption, availability, and equitable access, when determining whether broadband is being deployed in a reasonable and timely fashion to 'all Americans.'"

Internet Providers That Won FCC Grants Try To Escape Broadband Commitments (arstechnica.com) 52

Posted by BeauHD on Wednesday August 02, 2023 from the surprise-surprise dept.
An anonymous reader quotes a report from Ars Technica: A group of Internet service providers that won government grants are asking the Federal Communication Commission for more money or an "amnesty window" in which they could give up grants without penalty. The ISPs were awarded grants to build broadband networks from the FCC's Rural Digital Opportunity Fund (RDOF), which selected funding recipients in December 2020. A group calling itself the "Coalition of RDOF Winners" has been meeting with FCC officials about their requests for more money or an amnesty window, according to several filings submitted to the commission. The group says broadband construction costs have soared since the grants were announced. They asked for extra money, quicker payments, relief from letter of credit requirements, or an amnesty window "that allows RDOF winners to relinquish all or part of their RDOF winning areas without forfeitures or other penalties if the Commission chooses not to make supplemental funds available or if the amount of supplemental funds the Commission does make available does not cover an RDOF Winner's costs that exceed reasonable inflation," a July 31 filing said.
A different group of ISPs urged the FCC to reject the request, saying that telcos that win grants by pledging to build networks at a low cost are "gaming" the system by seeking more money afterward. So far, the FCC leadership seems reluctant to provide extra funding. The commission could issue fines to ISPs that default on grants -- the FCC recently proposed $8.8 million in fines against 22 RDOF applicants for defaults. The Coalition of RDOF Winners doesn't include every ISP that was granted money from the program. But exactly which and how many ISPs are in the coalition is a mystery.

How about some more corporate welfare?

FCC Prepares $75 Monthly Broadband Subsidies For 'High-Cost' Areas (arstechnica.com) 36

Posted by msmash on Monday August 07, 2023 @01:24PM from the moving-forward dept.
The Federal Communications Commission is paving the way for $75 monthly subsidies to make broadband service more affordable for low-income households in certain "high-cost" areas. From a report: The $75 subsidy will be part of the Affordable Connectivity Program (ACP) that generally offers $30 monthly discounts to people with low incomes. The ACP was created by Congress in late 2021 and implemented by the FCC to replace a previous pandemic-related subsidy program. The ACP already provides $75 monthly subsidies for homes on tribal lands, but not in other areas. The US law that created the ACP lets the FCC make $75 subsidies available in areas where the costs of building broadband networks are higher than average.
That's what the FCC did in its action announced yesterday. "The Infrastructure Act specified that the $75 monthly benefit would support providers that can demonstrate that the standard $30 monthly benefit would cause them to experience 'particularized economic hardship' such that they would be unable to maintain part or all of their broadband network in a high-cost area," the FCC said. ACP subsidies are distributed to Internet service providers that enroll in the program and give customers discounts. Comcast, Charter Spectrum, AT&T, Verizon, and other ISPs last year agreed to make $30 plans with download speeds of at least 100Mbps available to eligible low-income households, essentially making the Internet service free when the $30 subsidy is applied.

So there it is,
Lefty

There has been no response to this last email. Emails from the BBB indicate that Charter is telling them that they are still working on the issue.

On Monday 8/7 at my whit's end after these several months of this back and forth phone and email nonsense with Spectrum, I went down to the local court house and filed a Small

Claims Court action. I then arranged for this document to be served by the local Sherriff's Deputy to the Charter lawyer who signed the previous lawyer letters.

This action was for about $5k, out of a maximum of $10k, in overpayment charges, reimbursement for computer peripheral equipment testing expenses, and the Linux computer I built specifically for testing in my so far futile attempt to get what I am paying for.

From: Spectrum VP [mailto: VP@charter.com]
Sent: Thursday, August 10, 2023 8:39 AM
To: Lefty Insider <lefty@tcw.org>
Cc: SVP@charter.com
Subject: RE: [EXTERNAL] My Continuing Quest for SK Whitebox testing

Mr. Insider,
I appreciate you sending the historical accounts of Charter internet speeds in New York. I was not aware of these issues.
Regarding the SK testing processes, this is obviously not an area we are in a position to influence or dictate. The credibility of SK organization is a result of their independence and if we are viewed as influencing their methods then they would lose their purpose for existing.
The fact remains that we demonstrated through an widely accepted SK protocol, that the FCC and a majority of internet provider and consumers agree is an impartial and representative test, that you are receiving the speeds you have subscribed to. We have explored other SK options but have not been successful in getting them to change their test methods or processes.
That being said I believe we are at an impasse. I will send James to retrieve the SK box as the network team would like to deploy it other place to ensure we are providing services as prescribed in other locations across our network.
Regards,
VP

And then of course there was some more nonsense from an apparently feckless BBB. I know… I only have myself to blame here for starting this with them.

Better Business Bureau, Inc.
29 Berlin Road
Cromwell, CT 06416
Phone: (860) 740-4500
Fax: (860) 740-4515
complaints@ct.bbb.org
www.bbb.org/connecticut

8/10/2023

August 10, 2023

Better Business Bureau
Attn: Dispute Resolution
29 Berlin Road
Cromwell, CT 06416
Phone: (860) 740-4500
Fax: (860) 740-4510
Email: info@ct.bbb.org
URL: http://www.bbb.org/connecticut

RE: CT BBB 20242113

Dear Dispute Resolution:

This letter is in response to your correspondence regarding the complaint submitted by Mr. Lefty Insider involving a service and billing concerns.

Charter records reflect Charter field personnel have investigated Mr. Insider's service concerns and have determined that Charter is consistently providing the speeds that Mr. Insider is subscribed to. A Charter representative spoke with Mr. Insider and informed that the account is on best rate available for the current level of service. The representative reviewed options with Mr. Insider for lowering his monthly rate; however, he declined to make any changes at this time.

Charter's stance on this matter is unchanged and we consider this complaint closed.

A Charter representative contacted Mr. Insider via email on July 27, 2023 and communicated the above information. The representative provided Charter's direct contact information to Mr. Insider for future reference.

Regards,
Corporate Escalations
Charter Communications

Better Business Bureau, Inc.
29 Berlin Road
Cromwell, CT 06416
Phone: (860) 740-4500
Fax: (860) 740-4515
complaints@ct.bbb.org
www.bbb.org/connecticut

8/11/2023

Complaint: 20242113

I am rejecting this response because:

Nothing in their response is factual in any way.

They have not contacted me with options nor have they tested my service to know that it is correct.

They are stonewalling you BBB, because they think that you won't do anything about it.

Are they right?

Sincerely,

Lefty Insider

And then finally a big final GFY from the BBB, indicating they are giving a black mark in Charter's permanent record.

Sent: 8/16/2023 3:23:47 PM
From:
BBB Serving Connecticut
To:
Mr. Lefty Insider
Subject:
A message from your BBB

Mr. Lefty Insider
PO Box any rural area in the US

Dear Lefty Insider,

This message is regarding Complaint ID # 20242113- Charter Spectrum
Thank you for following up with BBB regarding your position in the above-mentioned dispute. BBB understands that you are not satisfied with the business's response and have noted your dissatisfaction in our files. While we regret we were unable to reach your desired resolution, the business has provided BBB with its position. This matter has been closed in BBB files, and will appear in the company's BBB Business Review as: "Answered - the business addressed the issues within the complaint, but the consumer remains dissatisfied."

Please note, the text of your response may be publicly posted on BBB's website. BBB reserves the right to not post in accordance with BBB policy, and we may edit your response to protect privacy rights and to remove inappropriate language.

BBB appreciates the opportunity to assist you and sincerely hopes that you will contact us in the future for pre and post purchase assistance.

Sincerely,
Stewart Henderson
Dispute Resolution Specialist

More nonsense today as I received a Certified letter from the Spectrum VP repeating their June, not representative of anything, SK Whitebox tests to the two servers, one on SPECTRUMNET and the other on a Samknows.com site.

This appears to be a CYA letter, with an ending that basically said that they are done with me now and GFY.

Maybe they will like my next email, perhaps not I suspect.

From: Lefty Insider [lefty@tcw.org]
Sent: Friday, August 11, 2023 4:09 PM
To: 'Spectrum VP' VP@charter.com; SVP@charter.com; ExecVP@charter.com; COO@charter.com; CTO@charter.com; ExecVP-NetOps@charter.com; tom.rutledge@charter.com; Rutledge. Thomas M@charter.com; escallation@charter.com; SVC_CCEDCharter@charter.com; attorney@charter.com; kathleen.mayo@chartercom.com; John.Bickham@charter.com; Rich.DiGeronimo@charter.com; Magesh.Srinivasan@charter.com;; SVC_CCEDCharter@charter.com
Cc: TestEngineer@charter.com; SDirINet Prod@charter.com; engineers@charter.com; spectrumchatsupportengineers@charter.com aaron.romens@wisconsin.gov; regina.wade1@wisconsin.gov; datcphotline@wisconsin.gov; 'FCC' <consumercomplaints@fcc.gov>; 'FCC' <consumercomplaints@fcc.gov>; antitrust@ftc.gov; nicole.raisbeck@wisconsin.gov; 'WI AG Josh Kaul' <josh.kaul@doj.state.wi.us>; ag@doj.state.wi.us; josh.kaul@wisconsin.gov; 'DOJ - Communications Office' <dojcommunications@doj.state.wi.us>; consumerprotection@doj.state.wi.us; 'Kolb, Brian J - DATCP' <Brian.Kolb@wisconsin.gov>; nicole.raisbeck@wisconsin.gov; team@samknows.com; jmason@samknows.com; Alex.salter@samknows.com; A.Salter@samknows.com; Sen.Feyen@legis.wi.gov
Subject: RE: [EXTERNAL] My Continuing Quest for SK Whitebox testing, (the final days)

VP,
Due to the two week delay in your response, this matter is now evolved into a formal legal complaint. As a result, the situation is frozen as is, so do not be sending any of your people to my home, or engage in any further communications outside of a court of law.

"I appreciate you sending the historical accounts of Charter internet speeds in New York. I was not aware of these issues."
Well I hope you appreciated ALL of the historical news articles I provided demonstrating the long arc of ISP malfeasance, and untrustworthiness. This includes your current employer Charter as well as your former employer, Comcast. I will provide another recent example at the end of this email.

The fact remains that we demonstrated through an widely accepted SK protocol, that the FCC and a majority of internet provider and consumers agree is an impartial and representative test, that you are receiving the speeds you have subscribed to.
You and I both know that this is not actually true. I am a consumer and I or any others to my knowledge have had NO say in running these tests M-F /@7-11PM for one month in September 2021. (two years ago)
No data scientist would agree that a 0.0022% nationwide testing sample is representative of anything at all. . (0.00216% of 2.5 million households in Wisconsin and the 54 tests were not even all Charter)

How can you say that I am receiving the subscribed speeds when you refuse to test MY connection and the FCC/SK testing, two years ago, never even testing the 1000Mbps speed tier?

"We have explored other SK options but have not been successful in getting them to change their test methods or processes. "
I have never asked for them to do that, just to allow me to participate in their program, and for you to use your influence to facilitate that request. You refuse to lobby on behalf of your customer, so you are not serious about finding out, what you already know and don't really want publically exposed.

"I will send James to retrieve the SK box as the network team would like to deploy it other place to ensure we are providing services as prescribed in other locations across our network."
How about we do that for me, FIRST!

It's been sitting idle for some time now.

When the appropriate time arrives, I would be happy to ship this SK Whitebox back to the location of your choosing using a USPS shipping label you can provide to me via email at any time.
Lefty

PS. So the FCC gives you all $30 per month for 100Mbps service to poor people, and then you all raise your rates. Now you lobby for the higher rate, while still providing crappy 100Mbps service. Is this EVIL, or just greedy?

FCC Prepares $75 Monthly Broadband Subsidies For 'High-Cost' Areas (arstechnica.com)

> *Posted by msmash on Monday August 07, 2023 @01:24PM from the moving-forward dept.*
> *The Federal Communications Commission is paving the way for $75 monthly subsidies to make broadband service more affordable for low-income households in certain "high-cost" areas. From a report: The $75 subsidy will be part of the Affordable Connectivity Program (ACP) that generally offers $30 monthly discounts to people with low incomes. The ACP was created by Congress in late 2021 and implemented by the FCC to replace a previous pandemic-related subsidy program. The ACP already provides $75 monthly subsidies for homes on tribal lands, but not in other areas. The US law that created the ACP lets the FCC make $75 subsidies available in areas where the costs of building broadband networks are higher than average.*
> *That's what the FCC did in its action announced yesterday. "The Infrastructure Act specified that the $75 monthly benefit would support providers that can demonstrate that the standard $30 monthly benefit would cause them to experience 'particularized economic hardship' such that they would be unable to maintain part or all of their broadband network in a high-cost area," the FCC said. ACP subsidies are distributed to Internet service providers that enroll in the program and give customers discounts. Comcast, Charter Spectrum, AT&T, Verizon, and other ISPs last year agreed to make $30 plans with download speeds of at least 100Mbps available to eligible low-income households, essentially making the Internet service free when the $30 subsidy is applied.*

ISPs Complain That Listing Every Fee Is Too Hard, Urge FCC To Scrap New Rule (arstechnica.com) 160

Posted by BeauHD on Tuesday August 15, 2023 from the trying-to-create-loopholes dept.

An anonymous reader quotes a report from Ars Technica: The US broadband industry is united in opposition to a requirement that Internet service providers list all of their monthly fees. Five lobby groups representing cable companies, fiber and DSL providers, and mobile operators have repeatedly urged the Federal Communications Commission to eliminate the requirement before new broadband labeling rules take effect. The trade associations petitioned the FCC in January to change the rules and renewed their call last week in a filing and in a meeting with FCC officials. The requirement that ISPs list all their monthly fees "would add unnecessary complexity and burdens to the label for consumers and providers and could result in some providers having to create many labels for any given plan," the groups said in the filing on Friday.

The trade groups said the FCC should instead "require providers to include an explanatory statement that such fees may apply and that they vary by jurisdiction, similar to the Commission's treatment of government-imposed taxes," or require "the display of the maximum level of government-imposed fees that might be passed through, so that consumers would not experience bill shock with respect to such fees." The filing was submitted by NCTA-The Internet & Television Association, which represents Comcast, Charter, Cox, and other cable companies. The NCTA's ex parte filing described a meeting with FCC officials that also included wireless industry trade group CTIA and USTelecom, which represents telcos including AT&T, Verizon, Lumen (formerly CenturyLink), Frontier, and Windstream.

Comcast submitted its own filing urging the FCC to scrap the rules in June. The calls to weaken the FCC's truth-in-billing rules angered consumer advocates, as we wrote at the time. "The label hasn't even reached consumers yet, but Comcast is already trying to create loopholes. This request would allow the big ISPs to continue hiding the true cost of service and frustrating customers with poor service," Joshua Stager, policy director at media advocacy group Free Press, told Ars. Congress required the FCC to implement broadband labels with exact prices for Internet service plans in a 2021 law, but gave the FCC some leeway in how to structure the rules. The FCC adopted specific label rules in November 2022. The labels must be displayed to consumers at the point of sale and include monthly price, additional charges, speeds, data caps, additional charges for data, and other information. The FCC rules aren't in force yet because they are subject to a federal Office of Management and Budget (OMB) review under the US Paperwork Reduction Act.

45 million for 1200 people is about $37,500 per person.

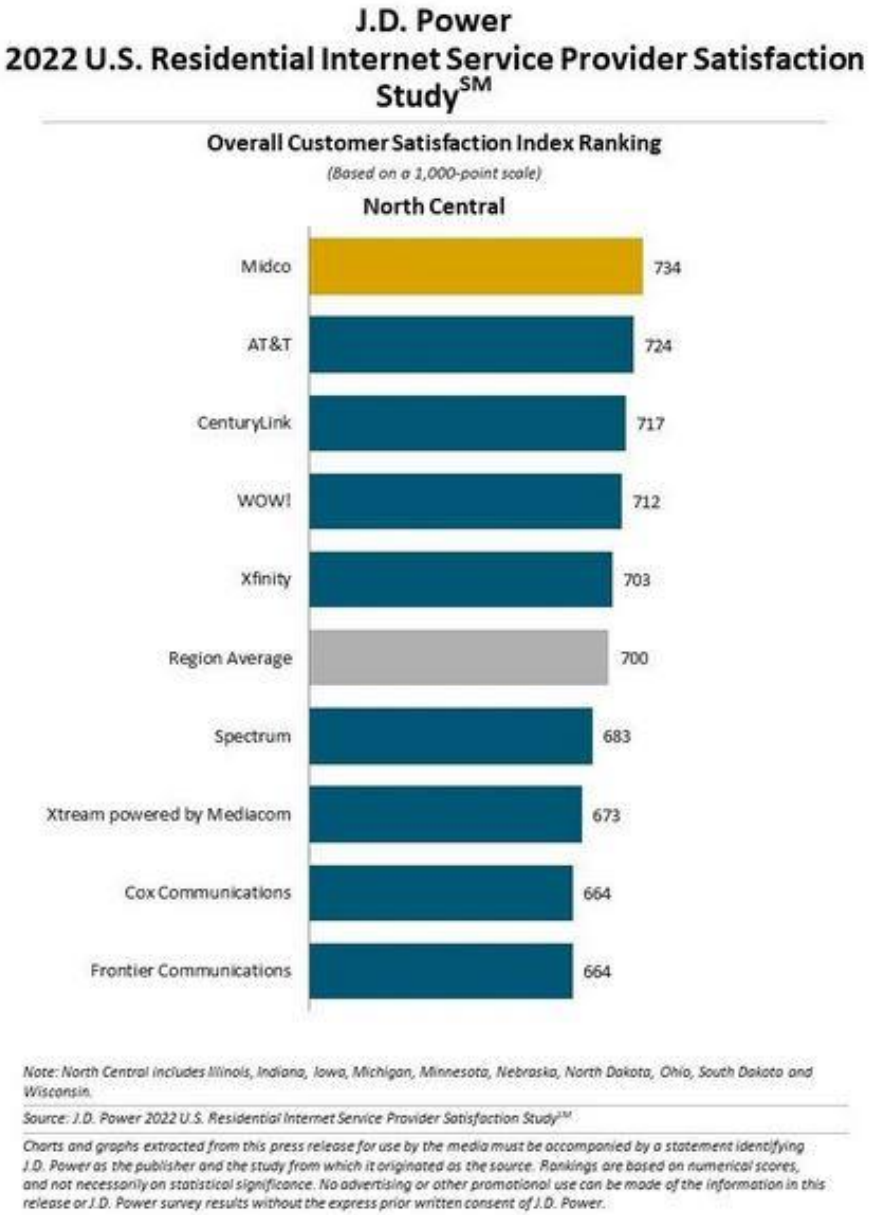
US Announces More New Funding for Rural Broadband Infrastructure (apnews.com) 2

Posted by msmash on Monday August 21, 2023 @10:43AM from the moving-forward dept.

The Biden administration on Monday continued its push toward internet-for-all by 2030, announcing about $667 million in new grants and loans to build more broadband infrastructure in the rural U.S. From a report: "With this investment, we're getting funding to communities in every corner of the country because we believe that no kid should have to sit in the back of a mama's car in a McDonald's parking lot in order to do homework," said Mitch Landrieu, the White House's infrastructure coordinator, in a call with reporters. The 37 new recipients represent the fourth round of funding under the program, dubbed ReConnect by the U.S. Department of Agriculture. Another 37 projects received $771.4 million in grants and loans announced in April and June.

The money flowing through federal broadband programs, including what was announced Monday and the $42.5 billion infrastructure program detailed earlier this summer, will lead to a new variation on "the electrification of rural America," Landrieu said, repeating a common Biden administration refrain. The largest award went to the Ponderosa Telephone Co. in California, which received more than $42 million to deploy fiber networks in Fresno County. In total, more than 1,200 people, 12 farms and 26 other businesses will benefit from that effort alone, according to USDA.

Spectrum ranks below average in Wisconsin.
When I was a student 60% was an F grade, and also later when grading student papers.



http://www.tcw.org/2022-Fixed-Measuring-Broadband-America-Report.pdf

Hmmm, 15 minutes huh, I wonder what they are rebooting and why.

From: Spectrum [mailto:MyAccount@spectrumemails.com]
Sent: Thursday, August 17, 2023 8:24 AM
To: lefty@tcw.org
Subject: Service Maintenance Scheduled in Your Area

Service Maintenance Scheduled in Your Area

Hello LEFTY,
Spectrum is planning service maintenance in your area. This upgrade will take place automatically, and there is no action required on your part. This maintenance is scheduled so we can continue to provide you quality service.

Maintenance Details
Date:
Friday, August 18, 2023
Service Affected:
TV, Internet, Voice
Time Window:
12:00 AM - 6:00 AM
Estimated Interruption:
15 minutes

Spectrum Voice customers: Access to 911 will be briefly unavailable during this time window. Please ensure that you have other options such as a charged cell phone, available in an emergency.

Your services should return automatically once the maintenance is complete. If you have connectivity issues following this time window, try these simple troubleshooting solutions.

Thank you for choosing Spectrum,
Spectrum Support Team
Please do not reply to this message. Replies to this message are routed to an unmonitored mailbox. If we can be of further assistance, please visit Spectrum Support.

This email was sent to: lefty@tcw.org. If you received this email in error, please let us know.

©2023 Charter Communications. All rights reserved | Privacy Policy. This message was sent by Charter Communications.

And then comes the final kiss-off from the DATCP. Charter gets a three year black mark on their permanent record, Oh NO! Plus an F rating from the BBB? That will surely make them change their ways!

From: Wade, Regina H - DATCP [mailto:regina.wade1@wisconsin.gov]
Sent: Friday, August 18, 2023 11:39 AM
To: lefty@tcw.org
Subject: Consumer Complaint XXXXXX

Good morning,
Please see the attached letter regarding a follow up to the complaint you filed with the Department of Agriculture, Trade and Consumer Protection. I apologize for the delay in getting this to you as I was out of the office for an extended period.
Sincerely,

Regina Wade
Consumer Protection Investigator – Mediation Unit
Division of Trade and Consumer Protection
Wisconsin Department of Agriculture, Trade and Consumer Protection
Phone: (608) 224-4653
Fax: (608) 224-4677
regina.wade1@wisconsin.gov

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Friday, August 18, 2023 12:48 PM
To: 'Wade, Regina H - DATCP' <regina.wade1@wisconsin.gov>
Subject: RE: Consumer Complaint XXXXXX

Regina,
You say you have no further authority, but you can forward this complaint to the AG's office for investigation right?
Lefty

State of Wisconsin
Governor Tony Evers

Department of Agriculture, Trade and Consumer Protection
Secretary Randy Romanski

August 18, 2023

Lefty Insider PO Box any rural area Anytown, USA lefty@tcw.org

RE: File XXXXXX (Refer to this number when contacting our agency) Charter Communications Inc 6399 S Fiddlers Green Cir Attn: W. Wesselman Greenwood Vlg CO 80111-4949

Dear Lefty Insider:

I have received a response from Charter Communications Inc concerning your complaint, which does not offer a resolution. I have enclosed a copy of the reply for your information.

There appears to be a dispute of the facts regarding this complaint. Our department does not have the authority to make a determination as to who is correct. That must be done in a court of law.

Since your complaint was not resolved through mediation, you have the option to contact a private attorney to discuss your legal remedies or file in small claims court. A fact sheet on small claims court is available on our website at datcp.wisconsin.gov.

I have recorded your complaint in our computer database, and it will be included in information provided to consumers who inquire about the business for a three-year period. It also will assist us in monitoring the business community for unfair business practices.

Thank you again for bringing your complaint to our attention.

Sincerely,

Regina Wade Consumer Protection Investigator Mediation Unit Bureau of Consumer Protection Telephone: (608) 224-4653 FAX (608) 224-4677 Email: Regina.Wade1@wisconsin.gov

Enc.: Response

Charter
COMMUNICATIONS

August 10, 2023

SENT VIA ELECTRONIC MAIL

Ms. Regina Wade Consumer Protection Investigator Department of Agriculture, Trade and Consumer Protection State of Wisconsin Post Office Box 8911 Madison, Wisconsin 53708

RE: Mr. Lefty Insider File Number: XXXXXX (in rebuttal to File Number XXXXXX)

Dear Ms. Wade:

Charter Communications, Inc. ("Charter) hereby submits its rebuttal response in the above-referenced matter.

Mr. Insider has concerns about his intermittent speed test results. He states that he tests his speeds quite often, across many devices, multiple times a day through his Nighthawk router connected via Ethernet (Cat 7). We have conducted multiple visits to his home in the past, and we have always confirmed that he is receiving the proper speeds to which he subscribes. We were able to test his speeds with a SamKnows device in his house using his router that we provided. At the same time, we also deployed a SamKnows device in the hub connected to a D3.1 modem that was on the same port as Mr. Insider's service. On both devices, the speed tests concluded that we are consistently providing the speeds to which Mr. Insider subscribes.

Our Field Operations Team has had conversations with Mr. Insider, and he does not agree with the test results as it varies form his own testing methods. The attached letter was sent to Mr. Insider outlining our position in this matter.

Please do not hesitate to contact us with any further questions.

Respectfully submitted, /s/ William C. Wesselman Sr. Director, Law – Regulatory

Enclosure (1)

888.GET.CHARTER

6360 S. Fiddler's Green Circle

www.charter.com

Greenwood Village CO 80111

Spectrum

Mr. Lefty Insider

Dear Mr. Insider,

I want to thank you for being a loyal customer of Charter / Spectrum. I appreciate your regular sharing of concerns regarding your speed test results and the details you have provided.

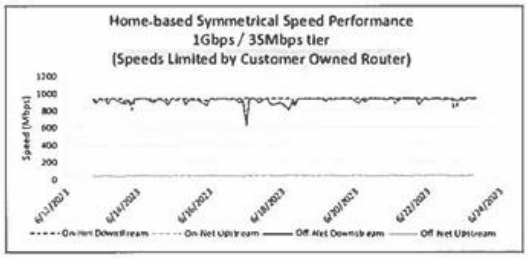
Regarding your concern about internet speeds, we are confident that we are consistently providing the internet speeds to which you are subscribed as evidenced by the Sam Knows (SK) testing that we conducted in your home from June 12th thru June 24th.

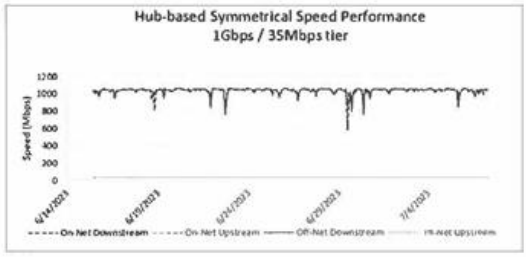
The detail of the testing is below.

Hub and Home performance

Measured tier performance is consistent at the home and in the hub for 1G service. Home performance currently limited by 1G Ethernet port on customer router

Location	Connection to the network	Service Group	Targets	Target Location	On Charter's Network	Modem Make/Model	Total Downstream Tests	Avg Median of DS	Total Upstream Tests	Avg Median of US
Home	SamKnows Whitebox ⇔ Customer Owned Router ⇔ Charter modem	K589	t1.st.chi10.rbone.rr.com	Chicago	Yes	Ubee EU2251	105	933 Mbps	105	39 Mbps
			n1-fcc-chicago-us.samknows.com	Chicago	No	Ubee EU2251	106	917 Mbps	106	39 Mbps
Hub	SamKnows Whitebox ⇔ Charter modem		t1.st.chi10.rbone.rr.com	Chicago	Yes	Sercomm E52251	262	1038 Mbps	263	38 Mbps
			n1-fcc-chicago-us.samknows.com	Chicago	No	Sercomm E52251	259	1035 Mbps	179	38 Mbps





Charter

The SK device was installed on your 1G router ethernet port, and testing was conducted both on net and off net per SK prescribed protocols with results being near the maximum based on your 1G router port capabilities. In addition, we also tested your service in the hub site using a SK device connected directly to a Spectrum modem. The test results from that assessment consistently reflected that 1G speeds delivered to both the on net and off net SK locations.

Given that our review utilized SamKnows testing protocol, the ISP industry and FCC accepted standard, we are confident we are providing to you the service speeds associated with your subscription. We have explored and exhausted additional testing requests utilizing the SK protocols and have not been able to accommodate your requests.

Charter continues to now hide behind the cover of the SamKnows tests, while not actually doing that testing completely, and not allowing me to actually run those tests.

First it was my router (s), then it was my11 computers, (four OS's across five form factors) and now finally when none of those worked, the problem is _my_ idea of how testing should be done. But in reality my idea of testing is the same at the FCC/MBA idea.

http://www.tcw.org/2022-Fixed-Measuring-Broadband-America-Report.pdf
http://www.tcw.org/Technical-Appendix-fixed-2022.pdf

I believe with this extremely long treatise I have factually proved my case. It remains to be seen if this monopolistic corporation is moved to corrective action by these facts, with or without regulatory pressure.

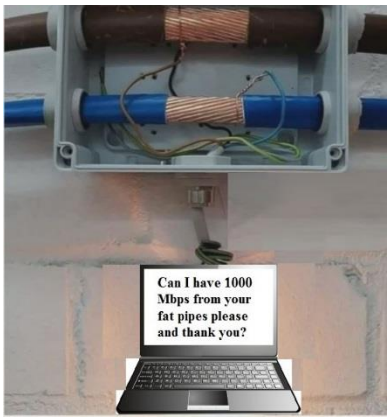
As for the centralization of the Internet and the resulting surveillance capitalism, data harvesting and social ills this has created; see my book *The Insider Goes Deep (Tales from the Dark Web)* for possible solutions.

Now it is time for this author to quote Forrest Gump and one of his favorite lines that "this is all I have to say about that".

Pending of course my receipt of a SamKnows or RIPE Atlas probe for further testing…

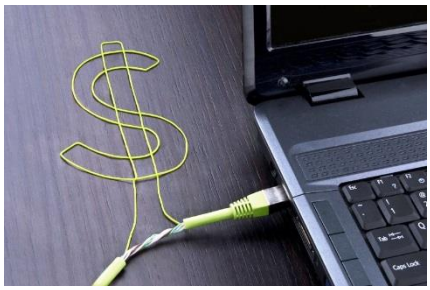
Or do I need to pursue this with Thomas M. Rutledge, Executive Chairman of Charter Communications? Rutledge,ThomasM@charter.com; tom.rutledge@charter.com anyone?

I did eventually forward a few emails to him asking for his intervention into this three year old saga. No response yet, although sometimes the effects of corporate fecal gravity are not immediately and readily visible.



Can I have more than a dribble from your fat pipes, please and thank you?

Meanwhile, $pectrum is continuing to suck me dry.



Appendices

Broadband Conversations with an ISP

From: Info [mailto:support@cyberlynk.net]
Sent: Monday, March 29, 2021 9:42 AM
To: lefty@tcw.org>
Subject: RE: Spectrum Blues
Lefty,
Good to hear from you. Depending on the city Spectrum will connect to the Charter network or legacy TWC network. They are doing some weird things these days.
Not sure if you call into Spectrum they will be able to do much but good luck.
Stay safe…
Thank you,

From: Support [mailto:support@cyberlynk.net]
Sent: Monday, March 29, 2021 10:16 AM
To: lefty@tcw.org>
Subject: RE: Spectrum Blues
Lefty,
I have seen similar trace routes from customers in the middle of the Wisconsin that just received new cable service. I have never heard of it getting better or Spectrum being able to help. It sucks but since it does not directly relate to me/CyberLynk I am ultimately unsure of the outcome.
Maybe you should move back to a larger city…. ;)
Good to hear from you.
Support

From: Support [mailto:support@cyberlynk.net]
Sent: Wednesday, March 09, 2022 3:47 PM
To: lefty@tcw.org>
Cc: 'Support ' <support@cyberlynk.net>
Subject: RE: Need a proof reader
I don't see anything structurally wrong with your commentary but the lists of providers are not an exhaustive list for Southeastern Wisconsin which is all of I really know without a google search for other providers in the Midwest…
Do you get anywhere with all of these posts/articles? I can appreciate the work and understand the issues but you are fighting big government and long standing monopolies.
Thank you, Support

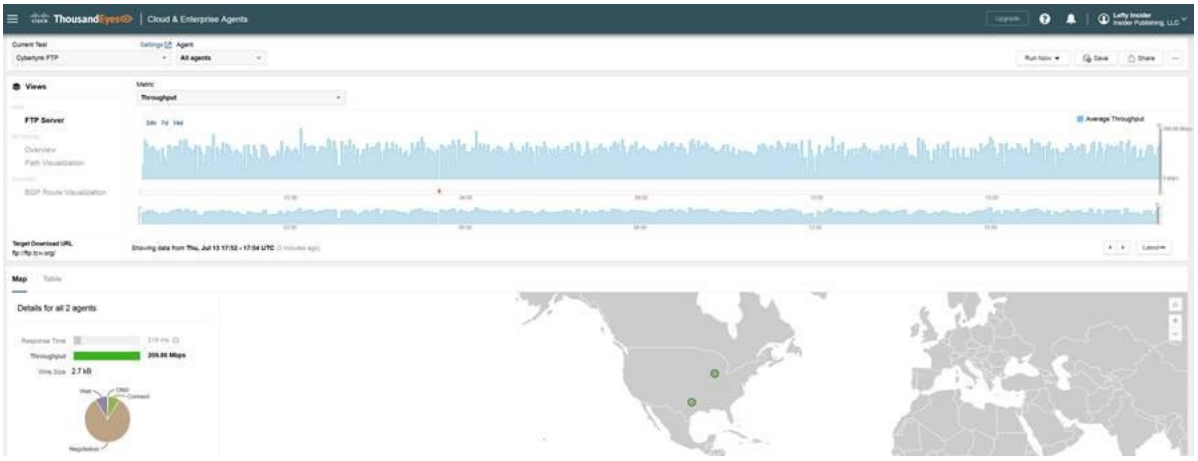
From: Support [mailto:support@cyberlynk.net]
Sent: Monday, January 09, 2023 8:19 AM
To: lefty@tcw.org>
Subject: RE: web hosting costs
Those are some crazy speeds. Thank you for fighting for the little guys. Now maybe you could work on the upload speeds with these providers. Its 2023 and they are still limiting upload speeds.
Happy new year…Support

From: Support [mailto:support@cyberlynk.net]
Sent: Monday, March 20, 2023 11:05 AM
To: 'Lefty' <lefty@tcw.org>
Subject: RE: My Speedtest and TMN Results

Lefty,
I reviewed your emails and while I appreciate the fight I doubt there is much that can be done. Speedtest results vary wildly from one provider to the next based on the time of day and the provider you are using. Providers like CyberLynk that use the speedtest.net platform allow speedtest.net users free access to the servers we host the speedtest.net applications on in our datacenters. We are giving away free bandwidth to people who are running speedtests from all over the world. We do this while receiving no revenue. We are providing a full 1Gbps connection to the speedtest.net servers we run in our datacenters. They run at 600-800Mbps throughout the day. So you speedtests might be affected by this traffic too.
Please we use *noction.com* to spread our Internet bandwidth across SIX different Internet providers in our Milwaukee datacenter to try and ensure the best/fastest routes in/out of our Milwaukee datacenter on a 10Gbps backbone.
I wish you luck in fighting Spectrum as it needs to be done. There are just not enough hours in the day. And the monopoly says go screw yourself we can do what we want. Till other providers are allowed to enter the market and the barriers are lessened/removed to allow competition these issues will be the norm.
Support

From: Lefty Insider <lefty@tcw.org>
Sent: Thursday, July 13, 2023 1:37 PM
To: 'Support' <support@cyberlynk.net>
Subject: What do you make of this?

This is how ThousandEyes sees FTP from my webserver:

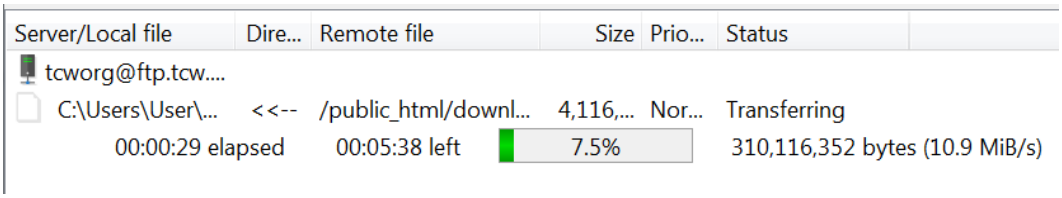


219ms response time and 210Mbps throughput from server agents in Chicago, Dallas, and Toronto.

https://app.thousandeyes.com/dashboard/?dashboardId=4-1487426

From: Support [mailto:support@cyberlynk.net]
Sent: Thursday, July 13, 2023 1:51 PM
To: 'Lefty Insider' <lefty@tcw.org>
Subject: RE: What do you make of this?
Lefty,
The screenshot is too small for me to read. Is your point that you want to reach 1Gbps via FTP?
Why you are getting 219ms is weird. We have plenty of bandwidth to go around.
Let me know…
Thank you,
Support

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Thursday, July 13, 2023 2:50 PM
To: 'Support' <support@cyberlynk.net>
Subject: RE: What do you make of this?
Support,
So save it and blow it up. <g>
I am testing Spectrum's network.
I don't need 1Gbps FTP, but would like more than 90 if at all possible. See my previous message. Not saying you are the bottle neck, but am testing Spectrum. This is FileZilla me to you.



91MBps speed after converting MiB/s to Mbps

Here is a blowup using the TE Chicago server agent only.

Dallas server agent is showing 198.95Mbps. Have you used ThousandEyes?
Lefty

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Thursday, July 13, 2023 10:47 PM
To: 'Support' <support@cyberlynk.net>
Subject: RE: What do you make of this?
Support,
Do you remember when I had wireless broadband connection and I had a website address from you that I could see SNMP data in real time?
I think it was PRTG software perhaps. Is there a way for me to see that now?
Coming into www.tcw.org and ftp.tcw.org from 71.82.XXX.XXX
Btw, am seeing 256Mbps right now at hostingsupport.io.
PS. I can't get Spectrum to show me SNMP data. "We just don't do that."
Thanks buddy,
Lefty

From: Support [mailto:support@cyberlynk.net]
Sent: Friday, July 14, 2023 10:34 AM
To: 'Lefty Insider' <lefty@tcw.org>
Subject: RE: What do you make of this?
Lefty,
Are you referring to our cacti (mrtg like) traffic graphs?
If so, we only keep those at the host node level and do not share/give access to those to customers.
To be honest there is so much between you and where you are testing to that trying to compare one test point to another is tough. I get what you are trying to do but the conditions on the Internet are always changing and you/we have no idea if someone in the middle or on either end is limiting or there is a bottleneck somewhere that will make this hard to prove with any certainty.
Good luck.
Thank you,
Lefty

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Friday, July 14, 2023 10:54 AM
To: 'Support' <support@cyberlynk.net>
Subject: RE: What do you make of this?
Support,
Ok, was worth a shot.
Thanks,
Lefty

Broadband Conversations with a Reporter

From: Reporter [mailto: reporter@jrn.com]
Sent: Monday, June 07, 2021 10:49 AM
To: Lefty <lefty@tcw.org>
Subject: RE: Linchpin to rural survival article
Good morning, Lefty
Many thanks for sending this my way!
We have three more broadband articles, coming soon, as part of a series.
I will take a close look at what you've sent.
All the best,
Reporter

From: Lefty <lefty@tcw.org>
Sent: Monday, June 7, 2021 10:41 AM
To: Reporter <Reporter@jrn.com>
Subject: Linchpin to rural survival article
Reporter et al,
I read your article in the HRT with interest, and have some ideas on how it could have been more comprehensive.
The attached text file of IP address will show you the distribution across the state, at least for Charter/Spectrum, as each IP address reflects one customer cable modem or at the very least one IP address assigned to that area. You can see that the distribution highly favors the more populated areas.
The other issue beyond access is advertised speed versus actual speed.
I have attached an additional email, with more specific information.
Below is an email that I sent previously to some politicians and PSC members who do not regulate Internet carriers and that is part of the problem here. The monopoly carries are putting up resistance here just like back in the rural electrification days.
Certainly it does not cost $30k per mile to string fiber cable on telephone poles. They don't have to drill through rock to bury it. Anywhere there is electricity or telephone service there should be Internet cabling.
It only makes sense,
Lefty

From: Reporter [mailto: Reporter@jrn.com]
Sent: Monday, June 07, 2021 10:49 AM
To: Lefty <lefty@tcw.org>
Subject: RE: Linchpin to rural survival article
Good morning, Lefty
Many thanks for sending this my way!
We have three more broadband articles, coming soon, as part of a series.
I will take a close look at what you've sent. All the best, Reporter

From: Lefty <lefty@tcw.org>
Sent: Monday, June 7, 2021 10:41 AM
To: Reporter <Reporter@jrn.com>
Subject: Linchpin to rural survival article
Reporter et al,
I read your article in the HRT with interest, and have some ideas on how it could have been more comprehensive.
The attached text file of IP address will show you the distribution across the state, at least for Charter/Spectrum, as each IP address reflects one customer cable modem or at the very least one IP address assigned to that area. You can see that the distribution highly favors the more populated areas.
The other issue beyond access is advertised speed versus actual speed.
I have attached an additional email, with more specific information.
Below is an email that I sent previously to some politicians and PSC members who do not regulate Internet carriers and that is part of the problem here. The monopoly carriers are putting up resistance here just like back in the rural electrification days.
Certainly it does not cost $30-50k per mile to string fiber cable on telephone poles. They don't have to drill through rock to bury it. Anywhere there is electricity or telephone service there should be Internet cabling.
It only makes sense,
Lefty

From: Lefty [mailto: lefty@tcw.org]
Sent: Sunday, May 23, 2021
To: 'Sen.Marklein@legis.wi.gov' <Sen.Marklein@legis.wi.gov>; 'rep.summerfield@legis.wisconsin.gov' <rep.summerfield@legis.wisconsin.gov>
Cc: 'Rep.Sortwell' <Rep.Sortwell@legis.wisconsin.gov>; 'Sen.Jacque' <Sen.Jacque@legis.wisconsin.gov>
Subject: You need to get to work on this now, ahead of the Federal Infrastructure Bill and more state funding for rural broadband!
Gentlemen,
The horse had already left the barn on past FCC funding, but that we as a State don't want to miss out on the next wave of funding. $100 billion for broadband You need to get to work on this right now ahead of the Federal Infrastructure Bill so Wisconsin doesn't lose out on Federal monies for Broadband yet again.
The restrictive laws in place banning or restricting municipal and nonprofit Internet providers jeopardizes this funding I believe. It contradicts the pending broadband funding priorities coming from the administration and the FCC.
Coddling the incumbent monopoly providers who have promised and yet not delivered fiber optic cabling for the past thirty years have proven that the invisible hand of the free market does not work here, despite 400 billion dollars of tax subsidies/corporate welfare. See attached.
My previous emails to you also reveal that these existing incumbent monopolies, i.e. Charter, do not now even deliver the slower speeds which they advertise and charge for.
At 25Mbps you don't get decent Internet because they don't actually deliver that. Frontier just got caught lying about it. Even at 100Mbps, the incumbent providers don't deliver that speed all the way to the Internet. They can only deliver it to an SPECTRUMNET test site 100 miles or so away. See attached speed test files.
The goal here should be symmetrical 1000Mbps fiber. Not just to selected Wisconsin communities, but statewide. This has been subsidized and promised for 30 years, but never delivered. You just can't expect different results by doing the same things over and over.

We in rural Wisconsin need you to "get with the program" to promote the educational and employment opportunities that rural broadband will bring. If you think about this for a bit, it is not unlike the Great Lakes, Mississippi River ports, the railroad system, the town, county, state, and Interstate highway systems, rural electrification, RFD postal service, and public water and sewer systems of the past. Economic development follows the infrastructure.
Chickens lay eggs. It's a simple history lesson. See one more problem below.

> • *Wisconsin Statute Annotated § 66.0422*
> *Wisconsin state laws allow municipalities to own and operate broadband networks, but such networks can only be paid for by subscribers of the service, not the general population. Municipalities are required to conduct feasibility studies and hold public hearings prior to offering service, allowing telecom incumbents ample opportunity to stall broadband projects. Public entities must include phantom costs in their rates and are not able to charge rates that are lower than what incumbents charge for the same service. The state laws also prohibit municipalities from subsidizing telecom services.*

https://broadbandnow.com/report/municipal-broadband-roadblocks/
https://statescoop.com/report-municipal-broadband-environment-has-gotten-significantly-worse/
https://statescoop.com/more-than-20-states-still-restrict-municipal-broadband/

Lefty

And a solution:

> *Washington State Votes To End Restriction On Community Broadband (vice.com)*
> *A report from Motherboard: Washington State lawmakers have voted to kill telecom-industry backed restrictions that limit the reach of community broadband. The Public Broadband Act (HB1336) passed the state Senate with a 27-22 vote on Sunday, after passing the House with a vote of 60-37 last February. State Representative Drew Hansen applauded the bill's passage on Twitter, stating it "reverses decades of bad policy" and opens the door to better, cheaper broadband. "Washington was one of only 18 states that restricted local governments from serving the public by providing public broadband," Hansen told Motherboard. "My bill eliminates that restriction."*
>
> *In Washington, a twenty-one year old law let some local governments build their own broadband networks, but prohibited local utilities from delivering broadband to customers directly. Hansen, who was also the primary sponsor of the state's new net neutrality law, says his bill finally eliminates those unnecessary limits entirely. "The Public Broadband Act broadly authorizes all local governments to provide broadband to anyone -- people who are totally unserved, people who have some Internet access but it's not affordable or reliable -- any people at all," Hansen told Motherboard. "Under the Public Broadband Act, Washington governments have completely unrestricted authority to provide broadband to the public."*

From: Reporter [mailto: Reporter@jrn.com]
Sent: Monday, June 07, 2021 10:49 AM
To: Lefty <lefty@tcw.org>
Subject: RE: Linchpin to rural survival article
Good morning, Lefty
Many thanks for sending this my way!
We have three more broadband articles, coming soon, as part of a series.
I will take a close look at what you've sent.
All the best,
Reporter

From: Reporter [mailto: reporter@jrn.com]
Sent: Wednesday, July 14, 2021 10:28 AM
To: Lefty <lefty@tcw.org>
Subject: RE: Milwaukee Journal Sentinel -- Spectrum issues follow-up
Good morning, Lefty
Here's the deal. We have included your complaint in our upcoming consumer complaints story.
We are, of course, speaking with DATCP, the PSC and others as well.
To be fair, we simply want to give Charter Spectrum a chance to respond to your complaint.
So, we will probably use your name when contacting them again.
As for part three of the series, it hasn't been published yet.
As of now, there was the first story and the second one on Kentucky/Vilas County.
Parts three, four and five, along with the consumer complaints story, are still a work in progress.
Thanks for all of your help.
Best,
Reporter

From: Lefty <lefty@tcw.org>
Sent: Wednesday, July 14, 2021 10:20 AM
To: Cub Reporter <Cubby@gannett.com>
Cc: Reporter <reporter@jrn.com>
Subject: RE: Milwaukee Journal Sentinel -- Spectrum issues follow-up
Hi Reporter,
I don't see any advantage for me allowing you to do this.
Based on the test data I have collected and shared, the speed issue extends way beyond me to the entire Northern Wisconsin legacy TWC network.
I know that they don't want to talk about the larger issue and want to narrow it down to one individual who they can buy off with a lower monthly rate, but they have already done that with me. Except being a retired guy with time on his hands, I won't let go of the bone.
Have you spoken with the state DATCP, Attorney General's office, or the PSC?
The apparent fecklessness of the DATCP might be a good idea for a future story series. I sent them a second case of fraud by a chain of car dealerships and they do not seem to be interested in this either.
PS. You can mention to Reporter that I have not been impressed by the second and third articles in the series, but to keep trying.
Lefty

From: Cub Reporter [mailto: Cubby@gannett.com]
Sent: Tuesday, July 13, 2021 4:34 PM
To: Lefty <lefty@tcw.org>
Subject: Milwaukee Journal Sentinel -- Spectrum issues follow-up
Good afternoon Lefty,
Thank you for speaking with me a couple weeks ago about your experiences with Spectrum. Our broadband series involves a couple pretty lengthy stories, and we are still in the process of writing and editing.
Last week, I reached out to Charter Communications with some general questions regarding how they answer consumer complaints. Without naming names, I mentioned that I had spoken with a customer who was not receiving the speeds they paid for. I received a call back today, and the spokesperson asked if they would be able to have your name so they could better answer questions regarding their service in your area.
I told them I am not at liberty to share source information with other organizations, but for the sake of the story I wanted to check with you if that is something you would be comfortable with.
Thank you,
Cubby

From: Reporter [mailto: Reporter@jrn.com]
Sent: Friday, June 18, 2021 10:14 AM
To: Lefty <lefty@tcw.org>
Subject: RE: Linchpin to rural survival article
Hello Lefty,
My apologies if I hadn't said this earlier, but we now have at least four more rural broadband stories coming. There was way too much to cover in only two of them.
Coming soon, we will have a deeper look at the federal and state grants, technologies and public policies.
I sincerely appreciate your insights and support.
Please don't give up on our series just yet!
All the best,
Reporter

From: Lefty <lefty@tcw.org>
Sent: Friday, June 18, 2021 10:09 AM
To: Reporter <Reporter@jrn.com>
Subject: RE: Linchpin to rural survival article
Reporter,
A bit disappointed on your second article, although I can appreciate your focus on the human impact of this situation.
The comparison of northern Wisconsin and Appalachia was a bit insulting and unnecessary in my view.
How about some focus on the obstacles, the politics, and the thirty years of broken promises?
How about some identification of what has and continues to stand in the way of solutions?
Not sure that identifying the specific characteristics of the problem, without identifying possible solutions meets the best traditions of local newspapers and something you could be proud of. More info below.
Lefty

Biden Administration's new broadband map shows stark digital divide
https://www.msn.com/en-us/news/technology/biden-administration-s-new-broadband-map-shows-stark-digital-divide/ar-AAL9KJl
Indicators of Broadband Need (Red equals Median Speeds Fixed Broadband Below 25/3 Mbps)
https://broadbandusa.maps.arcgis.com/apps/webappviewer/index.html?id=ba2dcd585f5e43cba41b7c1ebf2a43d0
Ohio Republicans close to imposing near-total ban on municipal broadband
https://arstechnica.com/tech-policy/2021/06/ohio-republicans-close-to-imposing-near-total-ban-on-municipal-broadband/

AT&T pretty much came out and said in public that return on shareholder investments is more important to them than providing rural broadband. Not a good use of capital they think, much better to pay it in stock dividends. And so it goes…

From: Lefty <lefty@tcw.org>
Sent: Saturday, June 19, 2021 11:21 AM
To: Reporter <reporter@jrn.com>
Subject: RE: Linchpin to rural survival article
Reporter,
Good, I am glad you and your editors see the significance of this subject.
Remember it is not just about any old connection, but the speed of that connection as well. You could see my own complaints as a semi-rural white person problem, but this subterfuge impacts everyone in my view. The lying and cheating of the incumbent monopolies is historically widespread and pervasive.
I wasted 20k words on Spectrum proving they did not provide me with their advertised speed only to be confronted with a feckless and impotent FCC, FTC, and Wis. DATCP. In addition to WI's PSC refusing to regulate what they should regulate.
I have attached some email correspondence info on these complaints.
If you want to see my five letters to Spectrum, and massive amounts of test data.
Keep up the good work, someone has to…☺
Lefty

From: Lefty <lefty@tcw.org>
Sent: Thursday, July 29, 2021 10:46 AM
To: Reporter <reporter@jrn.com>
Subject: Fast Internet Everywhere Could Add $160 Billion to U.S. Economy
https://www.bloomberg.com/news/articles/2021-07-28/fast-internet-everywhere-could-add-160-billion-to-u-s-economy

From: Reporter [mailto: reporter@jrn.com]
Sent: Thursday, July 29, 2021 10:49 AM
To: Lefty <lefty@tcw.org>
Subject: RE: Fast Internet Everywhere Could Add $160 Billion to U.S. Economy
Lefty, fyi, we published Part 3 of our series yesterday.
Three more stories to follow.
https://www.jsonline.com/in-depth/news/2021/07/14/weve-spent-billions-provide-broadband-rural-areas-what-failed-wisconsin/7145014002/

From: Reporter [mailto: reporter@jrn.com]
Sent: Friday, July 30, 2021 10:03 AM
To: Lefty <lefty@tcw.org>
Subject: RE: Fast Internet Everywhere Could Add $160 Billion to U.S. Economy
Lefty,
The HTR might have a short version of the story but probably not the full one.
Thanks again for your help.
Reporter

From: Lefty <lefty@tcw.org>
Sent: Friday, July 30, 2021 9:59 AM
To: Reporter <reporter@jrn.com>
Subject: RE: Fast Internet Everywhere Could Add $160 Billion to U.S. Economy
Reporter,
Thanks for the heads up, I haven't seen it in the HTR.
PS. Some trivia, I used to deliver the Sentential door to door in Appleton when I was a teenager.
Lefty

From: Reporter [mailto: reporter@jrn.com]
Sent: Monday, August 16, 2021 9:11 AM
To: Lefty <lefty@tcw.org>
Subject: RE: For the U.S. to fully realize the economic and cultural benefits of broadband, it must reach everyone and be built to last
Good morning, Lefty
Thanks for all of your help with these articles.
There's more coming soon.
Best,
Reporter

From: Lefty <lefty@tcw.org>
Sent: Sunday, August 15, 2021 12:50 PM
To: Reporter <reporter@jrn.com>
Subject: For the U.S. to fully realize the economic and cultural benefits of broadband, it must reach everyone and be built to last
Reporter,
Nice article. I would have been much harder on the incumbent monopolies for not investing the tax money they have received and continuing to use the copper phone lines and copper cable lines as milk cows rather than deploying fiber.
Certainly anywhere that has telephone lines or electric lines can be fed with fiber optic cable.
Elsewhere in the world, they are feeding these lines in storm sewer pipes to avoid tearing up streets.
Lefty

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Wednesday, September 01, 2021 10:40 AM
To: 'Reporter' <reporter@jrn.com>
Subject: My Internet story
Reporter,
I don't know if any of this is publishable, but this is my Internet story.
Read and enjoy,
https://www.tcw.org/lefty/Short Stories/The importance of high speed Internet connectivity to rural America.pdf
Lefty

From: Lefty Insider <lefty@tcw.org>
Sent: Saturday, June 18, 2022 10:24 AM
To: Reporter <reporter@jrn.com>
Subject: Why Rural Americans Keep Waiting for Fast Internet, Despite Billions Spent
Reporter,
Re: "There's more coming soon."
Is there still more coming soon?
Each state to receive at least $100 million each to expand high speed Internet access as part of the Infrastructure Investment and Jobs Act.
Any idea where this money is going?
Lefty

Why Rural Americans Keep Waiting for Fast Internet, Despite Billions Spent (wsj.com) 151

Posted by msmash on Thursday June 16, 2022 @03:35PM from the closer-look dept.
The U.S. government has spent billions of dollars on several rounds of programs to upgrade Internet speeds in rural areas over the past decade. Despite those efforts, many residents are still stuck with service that isn't fast enough to do video calls or stream movies -- speeds that most take for granted. From a report: Many communities have been targeted for broadband upgrades at least twice already, but flaws in the programs' design have left residents wanting. The Wall Street Journal analyzed 1.4 million largely rural census blocks that were included in a series of nationwide Federal Communications Commission broadband programs over the past decade. In the latest program, the Rural Digital Opportunity Fund, rolled out in 2020, Internet service providers won rights to public funding in about 750,000 census blocks, covering every state except Alaska. The Journal's analysis found that more than half of those census blocks -- areas with a combined population of 5.3 million people -- had been fully or partially covered by at least one previous federal broadband program. Most U.S. households today have access to Internet download speeds of at least 100 megabits per second and upload speeds of 10 Mbps, according to government data. Although the FCC's programs have made progress, some rural Americans still can't get 4 Mbps download and 1 Mbps upload speeds -- the level of service that was the federal standard in 2011. The broadband saga around Heavener, Okla., illustrates some of the problems. Heavener, with a population of around 3,000, is surrounded by cattle pastures and forested hills. Today some buildings on the main streets have good broadband service, but the Internet deteriorates outside town, residents say. Much of the area, in Le Flore County, was slated for upgrades under the Rural Digital Opportunity Fund in 2020 -- and some of those areas had already been part of prior programs.

https://www.fcc.gov/acp
https://www.pewtrusts.org/en/research-and-analysis/issue-briefs/2021/12/how-state-grants-support-broadband-deployment

Public Service Commission of Wisconsin, "Grant Application for American Rescue Plan Act Broadband Access Grants" (2021), https://psc.wi.gov/Documents/broadband/5-BF-2022 ARPA Broadband Access Grant Application.pdf.
https://psc.wi.gov/Pages/Programs/BroadbandGrants.aspx
https://maps.psc.wi.gov/apps/WisconsinBroadbandMap/

From: Reporter [mailto: reporter@jrn.com]
Sent: Saturday, June 18, 2022 11:23 AM
To: Lefty Insider <lefty@tcw.org>
Subject: RE: Why Rural Americans Keep Waiting for Fast Internet, Despite Billions Spent
Hi Lefty,
The state PSC will announce another round of broadband grants in the next week or two.
That money will go to a bunch of service providers, including small operators, across the state.
The federal government programs are supposed to help as well, but my guess is much of the money won't reach the hardest to serve places.
I will have another update soon.
Reporter

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Tuesday, June 28, 2022 9:37 AM
To: 'Reporter' <reporter@jrn.com>
Subject: RE: Why Rural Americans Keep Waiting for Fast Internet, Despite Billions Spent
Reporter,
This is an excellent book for background on writing your broadband stories.
"Internet for the People: The Fight for Our Digital Future" by Ben Tarnoff
https://www.amazon.com/dp/B089S6QPPS/ref=docs-os-doi_0
Lefty

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Tuesday, August 16, 2022 3:28 PM
To: 'Reporter' <reporter@jrn.com>
Subject: FW: Faster Internet Is Coming To America - as Soon as the Government Knows Where To Build It

Faster Internet Is Coming To America - as Soon as the Government Knows Where To Build It

Posted by msmash on Monday August 15, 2022 @01:22PM from the oops dept.
The government's $42.5 billion plan to expand Internet service to underserved communities is stuck in a holding pattern nearly nine months after approval, largely because authorities still don't know where gaps need to be filled. From a report: The broadband plan, part of the $1 trillion infrastructure bill signed by President Biden last November, stipulates that money to improve service can't be doled out until the Federal Communications Commission completes new maps showing where homes and businesses lack fast service. Lawmakers demanded new maps after flawed data in past subsidy programs caused construction projects across the country to bypass many of the Americans that they were supposed to serve. Officials warn, however, that getting the mapping right will take time.
"We understand the urgency of getting broadband out there to everyone quickly," said Alan Davidson, chief of the Department of Commerce office in charge of allocating the broadband funding. "We also know that we get one shot at this and we want to make sure we do it right." That could mean a delay in the expansion of service to people who have long struggled with slow Internet. Internet providers including AT&T, Charter Communications, Comcast and Verizon have yet to include any of the 2021 infrastructure law's broadband funding in their public financial projections for the coming years. "The maps are not going to be issued from

the FCC until a little bit later this year, and until that happens, the money really can't start to flow at the state level," AT&T Chief Executive John Stankey told analysts on a July conference call.

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Wednesday, August 17, 2022 2:43 PM
To: 'Reporter' <reporter@jrn.com>
Subject: RE: Imagine that!
Reporter,
The municipal part of the Fed rural broadband program, Warren and Sanders, got cut out of the bill.
If there was some Fed assistance I can see myself spearheading something like that up here.
Am so sick of Spectrum, and apparently Starlink is having trouble getting bandwidth.
Need some fiber in my Internet diet.
Otherwise, all is well here,
Lefty

From: Reporter [mailto: reporter@jrn.com]
Sent: Wednesday, August 17, 2022 8:13 AM
To: Lefty Insider <lefty@tcw.org>
Subject: RE: Imagine that!
Hello Lefty,
It would be great to see more efforts like this one. I wrote about something similar in Michigan a couple of years ago.
Very helpful if a community or individuals have the money and expertise to do it.
In Door County, I was told some wealthy property owners pooled their money and paid Charter Spectrum hundreds of thousands of dollars for less than a mile of fiber to their summer homes.
The price seemed unreasonable but they could afford it.
I hope you're doing well.
Reporter

From: Lefty Insider <lefty@tcw.org>
Sent: Wednesday, August 17, 2022 7:39 AM
To: Reporter <reporter@jrn.com>
Subject: FW: Imagine that!

Man Who Built ISP Instead of Paying Comcast $50K Expands To Hundreds of Homes (arstechnica.com) 104

Posted by msmash on Wednesday August 10, 2022 @10:41AM from the Comcast-driving-inspiration dept.
Jared Mauch, the Michigan man who built a fiber-to-the-home Internet provider because he couldn't get good broadband service from AT&T or Comcast, is expanding with the help of $2.6 million in government money. From a report: When we wrote about Mauch in January 2021, he was providing service to about 30 rural homes including his own with his ISP, Washtenaw Fiber Properties. Mauch now has about 70 customers and will extend his network to nearly 600 more properties with money from the American Rescue Plan's Coronavirus State and Local Fiscal Recovery Funds, he told Ars in a phone interview in mid-July.
The US government allocated Washtenaw County $71 million for a variety of infrastructure projects, and the county devoted a portion to broadband. The county conducted a broadband study before the pandemic to identify unserved locations, Mauch said. When the federal government money became available, the county issued a request for proposals (RFP) seeking contractors to wire up addresses "that were known to be unserved or underserved

based on the existing survey," he said. "They had this gap-filling RFP, and in my own wild stupidity or brilliance, I'm not sure which yet, I bid on the whole project [in my area] and managed to win through that competitive bidding process," he said. Mauch's ISP is one of four selected by Washtenaw County to wire up different areas.
Mauch's network currently has about 14 miles of fiber, and he'll build another 38 miles to complete the government-funded project, he said. In this sparsely populated rural area, "I have at least two homes where I have to build a half-mile to get to one house," Mauch said, noting that it will cost "over $30,000 for each of those homes to get served." The contract between Mauch and the county was signed in May 2022 and requires him to extend his network to an estimated 417 addresses in Freedom, Lima, Lodi, and Scio townships. Mauch lives in Scio, which is next to Ann Arbor. Although the contract just requires service to those 417 locations, Mauch explained that his new fiber routes would pass 596 potential customers. "I'm building past some addresses that are covered by other [grant] programs, but I'll very likely be the first mover in building in those areas," he said. Under the contract terms, Mauch will provide 100Mbps symmetrical Internet with unlimited data for $55 a month and 1Gbps with unlimited data for $79 a month.

Posted by msmash on Tuesday September 06, 2022 @04:09PM from the better-late-than-never dept.
***The Federal Communications Commission has collected precise broadband availability** information from Internet service providers for the first time and aims to release a first draft of a new broadband map in November, FCC Chairwoman Jessica Rosenworcel wrote Friday. From a report: The FCC last week "completed the first filing window for submitting data on where broadband service is and is not available," a milestone in the years-long process of creating an accurate US broadband map, she wrote. "For the first time ever, we have collected extensive location-by-location data on precisely where broadband services are available, and now we are ready to get to work and start developing new and improved broadband maps."*
The resulting map should show whether fixed broadband service is available at each residence or business location. The FCC's inaccurate broadband maps have long made it difficult to distribute deployment grants where they're needed most. Current maps are based on the Form 477 data-collection program in which ISPs report whether they offer service in each census block, which essentially lets ISPs count an entire census block as served even if it can serve just one home in the area. The new, more accurate maps will be used to help distribute $42.45 billion from the Broadband Equity, Access, and Deployment program created by Congress in the Infrastructure Investment and Jobs Act.

From: Reporter [mailto: reporter@jrn.com]
Sent: Wednesday, September 07, 2022 12:40 PM
To: Lefty Insider <lefty@tcw.org>
Subject: RE: FCC Has Obtained Detailed Broadband Maps From ISPs for the First Time Ever
Thanks for sending this my way, Lefty.

From: Reporter [mailto: reporter@jrn.com]
Sent: Wednesday, September 07, 2022 12:56 PM
To: Lefty Insider <lefty@tcw.org>
Subject: RE: FCC Has Obtained Detailed Broadband Maps From ISPs for the First Time Ever
Yes, that's what it says.
Now we will have to see what actually happens.
By the time the FCC gets its mapping fixed, if ever, most of the flood of grant money will have already been spent, much of it wasted.

From: Lefty Insider <lefty@tcw.org>
Sent: Wednesday, September 7, 2022 12:53 PM
To: Reporter <reporter@jrn.com>
Subject: RE: FCC Has Obtained Detailed Broadband Maps From ISPs for the First Time Ever
Reporter,
Not what it says here:
The new, more accurate maps will be used to help distribute $42.45 billion from the Broadband Equity, Access, and Deployment program created by Congress in the Infrastructure Investment and Jobs Act.

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Monday, September 12, 2022 9:54 AM
To: 'Reporter' <reporter@jrn.com>
Subject: More of the same?
Reporter,
TDS is advertising this as well, (2Gbx2Gb) but I don't know where in Wisconsin. Nowhere near here anyway.Lefty

Comcast Starts Rolling Out 2-Gigabyte Download Speeds to Millions of US Homes (theverge.com)

Posted by EditorDavid on Sunday September 11, 2022 from the broader-broadband dept.
Comcast says it's "evolving its entire network architecture" (along with its equipment and customer devices) — and it's not just a multi-gig network. They're calling it America's fastest — and its largest. It's being rolled out "immediately" to millions of homes and business, "combined with up to 5x-to-10x faster upload speeds."
"Comcast plans on bringing multi-gig Internet speeds to 34 cities across the U.S. by the end of this year," reports the Verge, "and will later expand its reach to more than 50 million households by the end of 2025." According to a press release, the company has already started rolling out 2-gig speeds over its broadband network in Colorado Springs, Colorado; Augusta, Georgia; Panama City Beach, Florida; and Philadelphia, Pennsylvania.
Customers in these cities will also get to take advantage of upload speeds that Comcast says are five to 10 times faster than what it currently offers. The upload speeds appear to max out at 200Mbps, even with the new Gigabit x2 plan, but Comcast intends to change that. It's launching multi-gig symmetrical speeds next year, which will enable multi-gig speeds for both downloads and uploads. ***"As part of this initiative, Comcast is accelerating the transformation of its network to a virtualized cloud-based architecture that is fully prepared for 10G and DOCSIS 4.0..." explains the press release, "which will deliver multi-gig symmetrical speeds over the connections already installed in tens of millions of homes and businesses."***
The big advantage of digital network technology is "rather than maintaining, updating, and replacing traditional analog network appliances by hand — which can take days or even weeks — Comcast engineers can reliably maintain, troubleshoot, and upgrade core network components almost instantly, with a few keystrokes on a laptop or mobile app. This also makes the network much more energy efficient and is an important element of Comcast's plan to become carbon neutral by 2035."

The parts I have bolded seem like BS to me. I am a technologist and don't understand this.
If any of this is actually true, I am sure this only applies to their internal networks.
They cannot bend the laws of physics.
But from a customer view, physical cabling, modems, routers, switches, and computer network adaptors all need to support the higher receive and transmit speeds of packet flows.
Or maybe I am just cynical…

From: Reporter [mailto: reporter@jrn.com]
Sent: Wednesday, September 14, 2022 6:17 AM
To: Lefty Insider <lefty@tcw.org>
Subject: RE: More of the same?
Thanks, Lefty.
I'm going to take a deeper look into TDS.
They were awarded a lot of RDOF money and seem to be headed into some of AT&T and Charter Spectrum territory. Reporter

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Friday, September 16, 2022 1:55 PM
To: 'Reporter' <reporter@jrn.com>
Subject: RE: More of the same?
Reporter,
Interestingly enough, I have noticed recent improvements in Spectrum speeds. Maybe my months long quest did have some impact in the end.
I see that they are no longer advertising 100 or 200 Mbps speeds on their website, just 300, 500, and 1000 Mbps speeds. Due to some competition?
I am seeing 300-400 Mbps on wired connections and 250-300 Mbps speeds on wireless. This is up about 100Mbps from Spring 2021.
I recently mapped my network testbed. Attached.
OTOH, the Charter VP I spoke with on the phone seemed to have this aversion to fiber (allergy?) in favor of milking the copper cable system for all it is worth for as long as it can, much like Frontier and DSL. Don't put money into it and lie about the bad speeds.
Reminds me of AT&T VP telling me in person how much he hated DSL back in the mid 90's, and that they would never expand it. Lefty

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Wednesday, September 21, 2022 8:26 AM
To: 'Reporter' <reporter@jrn.com>
Subject: Comcast promises huge boost to cable upload speeds by end of 2023
Full Duplex DOCSIS expected in 2023 but won't be available to everyone at first.
https://arstechnica.com/information-technology/2022/09/comcast-teases-milestone-in-plan-to-offer-multi-gigabit-cable-upload-speeds/

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Tuesday, October 18, 2022 9:37 AM
To: ' Reporter' <Reporter@jrn.com>
Subject: Comcast wanted $210,000 for Internet-so this man helped expand a co-op fiber ISP
Reporter,
So the wealthy continue to work around the monopolies.
Long but interesting article.
https://arstechnica.com/tech-policy/2022/10/comcast-wanted-210000-for-internet-so-this-man-helped-expand-a-co-op-fiber-isp/

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Friday, October 21, 2022 9:02 AM
To: ' Reporter' <Reporter@jrn.com>
Subject: FW: AT&T Hit With $23 Million Fine For Bribing Illinois Lawmaker
Reporter,
Apparently corporate welfare and monopoly status are insufficient for them. Lefty

AT&T Hit With $23 Million Fine For Bribing Illinois Lawmaker (techdirt.com) 38

Posted by BeauHD on Wednesday October 19, 2022 @08:02PM from the dirty-pool dept.
*An anonymous reader quotes a report from Techdirt: [AT&T] was fined $23 million for bribing a state lawmaker's ally in order to secure a key policy vote. According to a deferred prosecution agreement, the vote in question was a 2017 vote on Carrier of Last Resort (COLR) legislation that **would have eliminated AT&T's obligation to continue to provide landline service to all state residents**. AT&T of course wants to be free of having to provide dated landlines. Consumer groups are quick to note many of those landlines are used by old people who often can't afford (or don't understand how to use) cellular service, leaving them cut off from essential services and 911. They were also paid for on the back of millions in taxpayer subsidies, suggesting that taxpayers should have some say in the matter.*
Instead of just making its case, AT&T used an intermediary lobbying firm to deliver $22,500 to former Illinois Speaker of the House Michael J. Madigan to influence his vote: "AT&T allegedly used a lobbying firm as an intermediary to make the payment and disguise its true purpose. US Attorney John Lausch's office filed a one-count criminal information in US District Court for the Northern District of Illinois, charging AT&T Illinois with using an interstate facility to promote legislative misconduct. Former AT&T Illinois President Paul La Schiazza was indicted on five charges as a result of the same investigation."

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Saturday, October 29, 2022 9:40 AM
To: ' Reporter' <Reporter@jrn.com>
Subject: FW: Rural Areas To Get $759 Million in Grants for High-Speed Internet
Reporter,
Just watched a Netflix doc on Spotify. It was created in part because of nationwide government supplied broadband. Lefty

Rural Areas To Get $759 Million in Grants for High-Speed Internet (apnews.com) 59

Posted by msmash on Friday October 28, 2022 @02:01PM from the moving-forward dept.
The Agriculture Department announced this week that it is making available $759 million in grants and loans to enable rural communities to access high-speed Internet, part of the broader $65 billion push for high-speed connectivity from last year's infrastructure law. From a report: Agriculture Secretary Tom Vilsack and White House senior adviser Mitch Landrieu unveiled the grants during a visit to North Carolina. There are 49 recipients in 24 states. One is North Carolina's AccessOn Networks, which will receive $17.5 million to provide broadband service to 100 businesses, 76 farms and 22 educational facilities in the state's Halifax and Warren counties. Both counties are rural and have predominantly Black populations.
"Rural America needs this," Vilsack said. "Rural America deserves this." He made the

announcement in front of John Deere equipment, noting that rural areas tend to be where the electricity for cities is generated and where city dwellers and suburbanites go for vacations. The announcement and visit to North Carolina, a state with an open U.S. Senate seat, come as President Joe Biden and other top Democratic officials are trying to sell their achievements to voters before the Nov. 8 midterm elections. Landrieu, the infrastructure coordinator and former New Orleans mayor, told reporters on a Wednesday call that the Biden administration has already released $180 billion for various infrastructure projects.

From: Reporter [mailto: Reporter@jrn.com]
Sent: Thursday, November 03, 2022 9:49 AM
To: Lefty Insider <lefty@tcw.org>
Subject: RE: Charter Raises Base Internet To $80 a Month; Price Hikes To Hit 9.5M Users
Hi Lefty,
Thanks for sending these broadband stories my way.
I'm sorry I haven't said so earlier, but I appreciate them.
All the best,
Reporter

From: Lefty Insider <lefty@tcw.org>
Sent: Thursday, November 3, 2022 8:47 AM
To: Reporter <Reporter@jrn.com>
Subject: Charter Raises Base Internet To $80 a Month; Price Hikes To Hit 9.5M Users
Charter Raises Base Internet To $80 a Month; Price Hikes To Hit 9.5M Users (arstechnica.com)

Posted by msmash on Tuesday November 01, 2022 @04:44PM from the tough-luck dept.
Charter is raising prices on Spectrum home Internet service by $5 a month starting today, a company spokesperson confirmed to Ars. Standalone broadband prices are rising to $79.99 a month for 300Mbps download speeds, $99.99 a month for 500Mbps, and $119.99 a month for 1Gbps. 300Mbps is the advertised download speed for Charter's entry-level tier. From a report: The price increase takes effect today in most of Charter's 41-state territory, the company said. It affects broadband-only customers and broadband users who also subscribe to a Spectrum streaming TV package, but not cable TV customers. "The price for Spectrum Internet reflects the cost of delivering the best value in broadband for your family: 300Mbps starting speeds with no modem fees, data caps or contracts," the company said. Charter also said this is its first price increase on standalone broadband since December 2020. Customers currently on a promotional rate will keep paying that rate until the promotion expires. They'll pay the new, higher regular rate after that.

By way of comparison:
- Verizon FiOS Gigabit 940/880 Mbps speeds $69.99 /mo.
- AT&T Internet 1000 940/880Mbps $80 /mo.
- Gigabit Internet by XFINITY from Comcast 1 Gbps/35 Mbps $70.00 /mo.

From: Reporter [mailto: Reporter@jrn.com]
Sent: Friday, November 04, 2022 10:19 AM
To: Lefty Insider <lefty@tcw.org>
Subject: RE: New Hot Job: State High-Speed Internet Network Director
I'm still doubtful of all this money.
My personal guess is, a decade from now, we will look back and see that much of it was wasted or never accounted for.
It's been like turning on a firehose and expecting to know where all the water went.
So frustrating.

From: Lefty Insider <lefty@tcw.org>
Sent: Friday, November 4, 2022 9:49 AM
To: Reporter <Reporter@jrn.com>
Subject: New Hot Job: State High-Speed Internet Network Director
Follow the money…

New Hot Job: State High-Speed Internet Network Director (axios.com) 6

> *Posted by msmash on Wednesday November 02, 2022 @02:01PM from the closer-look dept. States are shoring up expertise in high-speed Internet networks by creating or expanding broadband offices to prepare for an influx of infrastructure cash. Ensuring that more than $40 billion in new funding connects every American to high-speed Internet service is a job that's falling to the states -- and they need help. From a report: Of all the job openings posted for states' burgeoning broadband offices, the "director" position is the most common vacancy, according to data The Pew Charitable Trusts shared with Axios. Directors are often responsible for crafting state broadband plans and overseeing hundreds of millions in funding from multiple state and federal programs. The Pew tracker found 15 director-level positions posted, out of about 68 total positions since September 2021. Washington, Colorado, and Maine had the most job postings. The Broadband Equity, Access and Deployment Program (BEAD), funded by the bipartisan infrastructure law, will provide $42.45 billion to expand high-speed Internet access by funding planning, infrastructure deployment and adoption programs in all 50 states, D.C., Puerto Rico and U.S. territories.*

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Friday, November 11, 2022 7:33 AM
To: ' Reporter' <Reporter@jrn.com>
Subject: RE: New Hot Job: State High-Speed Internet Network Director
Reporter,
This is very good if you haven't seen it.
Not unlike All the Presidents Me and Spotlight good.

The Fourth Estate
This docu-series presents a groundbreaking portrait of the men and women at The New York Times who are fighting for freedom of the press during the Trump administration's first history-making year.
https://www.amazon.com/The-First-100-Days/dp/B07GJX18MG/ref=sr_1_2?keywords=Fourth+Estate&qid=1668173318&sr=8-2
PS. As to money from a fire hose, I suspect it I a bit like eating an elephant. One bite at a time.
Lefty

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Saturday, November 12, 2022 7:44 AM
To: ' Reporter' <Reporter@jrn.com>
Subject: Re: New Hot Job: State High-Speed Internet Network Director
Reporter,
I was thinking that one way to approach this rural broadband funding issue would be to single out a few locations in Wi that received monies and the resultant economic development and contrast this then to other areas and what they are missing out on. This could awaken the public some.

Here are some potential areas that could be looked at:

- New tech businesses invented, innovation and productivity growth
- Reduction is society wide minority discrimination
- Existing businesses expanded, online shopping
- Population growth
- Increased home values
- Reduced unemployment
- New jobs added, employment opportunities and employment advancement
- Work from home opportunities expanded and resultant childcare problems resolved
- Telemedicine expansion
- Educational opportunities, elementary, secondary and post-secondary, online distance education
- Reduction in traffic congestion and air pollution
- Political participation
- Preparation for the next natural disaster, cyber-attack, pandemic, civil unrest

Rural electrification became universal in 25 years from 1935-1960.
Rural broadband has already been subsidized for 25 years and we are nowhere near universal access.
Lefty

From: Reporter [mailto: Reporter@jrn.com]
Sent: Monday, November 14, 2022 8:12 AM
To: Lefty Insider <lefty@tcw.org>
Subject: RE: New Hot Job: State High-Speed Internet Network Director
Good morning, Lefty
I like your idea of trying to quantify the economic impact of broadband.
One of the challenges would be pinning the improvements specifically to broadband, but I think we would present some strong examples.
A comparison of two towns or counties, right next to each other, could be enlightening.
Thanks for sending this my way. I have a lot of other stuff on my plate right now but will give this another look in a few weeks.
Please keep in touch.
Reporter

From: Reporter [mailto: Reporter@jrn.com]
Sent: Monday, November 14, 2022 9:20 AM
To: Lefty Insider <lefty@tcw.org>
Subject: RE: New Hot Job: State High-Speed Internet Network Director

We could probably find the resources to do it, Lefty, although I doubt that new broadband service, by itself, would be the sole reason for economic improvements.
The challenge would be to say **"how much"** of a factor it was in job growth and other categories.
I think that could be done, although I wouldn't want a story that states the obvious – such as Acme Manufacturing wouldn't have expanded in XYZ County if it didn't have high-speed Internet.
We'd need good data and strong examples.
It's worth pursuing.

From: Lefty Insider <lefty@tcw.org>
Sent: Monday, November 14, 2022 8:57 AM
To: Reporter <Reporter@jrn.com>
Subject: RE: New Hot Job: State High-Speed Internet Network Director
Reporter,
I would probably take some feet on the ground investigative reporting, and I don't know if you have the resources for that.
Lefty

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Thursday, November 17, 2022 8:45 AM
To: ' Reporter' <Reporter@jrn.com>
Subject: ISP deploys fiber service with a wrinkle-the users themselves own each network
Reporter,
A follow-up to a previous article.
Lefty

ISP deploys fiber service with a wrinkle—the users themselves own each network

Despite costly Silicon Valley project, CEO says this isn't just for wealthy areas.
Jon Brodkin – 11/16/2022, 6:00 AM

Founder frustrated with telecom industry

Next Level Networks was founded by CTO Darrell Gentry, who previously founded a phone company that provided DSL in the Midwest in the late 1990s and later founded a wireless ISP in Missouri. He was working at gaming company OnLive and living in Mountain View about a decade ago when a Comcast problem cropped up at his home.

"There was a period of time where no one in the entire neighborhood could watch Netflix at 6 pm on a weekday evening, and it really brought the community together. Everyone was stopping each other in the streets and comparing notes," Gentry told Ars. "Eventually, someone in the neighborhood figured out that [Comcast] had badly oversubscribed the node," and the problem was fixed.

Gentry's experience with Comcast and his own experience in telecom contributed to him wanting to build fiber networks. Telecom companies are among the biggest spenders on lobbying, and the US has "no real regulatory leadership," Gentry said. "There's no economic reason for the monopoly and duopoly incumbents to make the capital investments needed to fix the last-mile problem."

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Monday, November 21, 2022 9:06 AM
To: ' Reporter' <Reporter@jrn.com>
Subject: Nutrition Labels For Broadband Internet Are Finally Nearly Here

Nutrition Labels For Broadband Internet Are Finally Nearly Here (theverge.com) 23

> *Posted by BeauHD on Friday November 18, 2022 from the desperately-needed dept.*
> *Six years after we saw the FCC formally propose "nutrition labels" for your carrier's potentially confusing array of plans, the agency says it's finally happening. The Verge reports: This week, it's ordering US Internet service providers to adopt the label format you're looking at [here] -- or it will, as soon as some last bureaucratic elements get worked out. They've changed a bit since 2016 -- now, each plan will apparently have its own label rather than ISPs trying to cram all of them into a single sheet, they don't warn you about coverage, and apparently, ISPs will be able to point you to their network management policy legalese instead of having to ding themselves for throttling data or giving some apps a fast lane. They won't have to report packet loss, either, it seems. Thankfully, ISPs will still need to report their typical speeds and latency, not just reiterate their advertised speed. Hopefully, someone will audit that.*
> *Most big ISPs will have six months to slap the new labels onto their websites and distribute them in stores, though the FCC's giving ones with less than 100,000 subscribers a full year to comply. But none of those shot clocks start until the Office of Management and Budget reviews the order to make sure it complies with the Paperwork Reduction Act and similar statutes, the FCC notes, so it might be a bit longer. In the meanwhile, FCC Chair Jessica Rosenworcel suggests that ISPs might want to get ahead of things and adopt them on their own. The FCC also says it hopes these labels will evolve from here [...].*

From: Reporter [mailto: Reporter@jrn.com]
Sent: Wednesday, November 23, 2022 8:04 AM
To: Lefty Insider <lefty@tcw.org>
Subject: RE: The FCC has released its new broadband availability maps and will let residents challenge availability claims by ISPs.

Thanks for sending this my way, Lefty.
I wouldn't be surprised if the FCC has spent something like $100 million on broadband mapping.
It's become a very sad joke.
I'm going to look into it again soon.

From: Lefty Insider <lefty@tcw.org>
Sent: Wednesday, November 23, 2022 8:00 AM
To: Reporter <Reporter@jrn.com>
Subject: FW: The FCC has released its new broadband availability maps and will let residents challenge availability claims by ISPs.

https://www.zdnet.com/home-and-office/networking/broadband-availability-this-new-map-can-help-you-find-out-what-services-are-available/
And my results.
Lefty

From: Reporter [mailto: Reporter@jrn.com]
Sent: Wednesday, November 23, 2022 8:12 AM
To: Lefty Insider <lefty@tcw.org>
Subject: RE: The FCC has released its new broadband availability maps and will let residents challenge availability claims by ISPs.

Following up on my earlier email, I was probably too hasty.
Maybe the new maps are working. I still want to take a closer look.

From: Reporter [mailto: Reporter@jrn.com]
Sent: Wednesday, November 30, 2022 3:30 PM
To: Lefty Insider <lefty@tcw.org>
Subject: FCC broadband maps question
Importance: High
Hi Lefty,
I've finally found time to write about the new FCC broadband map.
If I recall correctly, are you getting a little less than half the speed that Charter claims for your address?
Are you going to challenge the map data, and if so, may I give you a call about it for the article?
And, answering your question about an Oxford comma, our style is not to use it – although some of us do. The Associated Press style book, which we generally follow, isn't that firm on it.
Reporter

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Monday, December 05, 2022 1:51 PM
To: ' Reporter' <Reporter@jrn.com>
Subject: Broadband woes
Reporter,
From a friend in Florida, north of Miami, with an 250/25 asymmetrical fiber connection from Hotwire. He is a programmer and works for Adobe from home as a software Quality Engineer. He is also an author.

There's a story behind this… At one point I had 50 mb down, 50 mb up with Hotwire communications. Then they "upgraded service" in the neighborhood. That took it to 100 mb down, 10 mb up. Thing is, I had actually been paying extra for the extra uplink bandwidth AND a fixed IP address. They just changed it without any notice, so I raised hell and escalated to a VP. She "gave in" an granted me a fixed IP address and 100 / 10 for no extra cost. But I would have to pay $20 extra per month for a whole 25 mb up, at which point I'd also get 250 mb down. I took the deal. The infrastructure could clearly handle more uplink speed but they simply won't grant it. I got the short end of that deal and there was nothing I could do about it. At least the service has been reliable.

Did you ever do any more bandwidth testing, outside of your local area?

I believe I'm getting the advertised speeds. I haven't reached back out to Hotwire to see if they might have a more symmetric speed, though honestly my 25 megabit uplink speed hardly ever limits what I can do.

One interesting thing… When I'm on the VPN to get into AdobeNet, my throughput FROM Adobe goes down to roughly half of what my link can support. I suspect either one of two things is happening: Either Adobe is limiting my speed at their end (unlikely as at least some other folks report getting full speed), ***or my ISP does not recognize the (encrypted) traffic and has decided to cut the speed of it down, since it's not part of the group of companies paying them a premium to provide the maximum bandwidth. That's a thing now.***

Btw, he is also a computer geek like me. Lefty

COOL HAND's computer setup.

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Thursday, December 01, 2022 10:38 AM
To: ' Reporter' <Reporter@jrn.com>
Subject: RE: FCC broadband maps question
Reporter,
You mentioned that no one wants to talk about service level.
What if the water Dept could give some places 5 gals per minute sometimes and only 2 gal per min some places?
What if you were prohibited from digging your own well? Like the state laws against municipal broadband.
The electric company could give full KWH only to some places, some of the time?
Or gas company give only partial cubic feet per min or therms?
Just saying…
Lefty

From: Reporter [mailto: Reporter@jrn.com]
Sent: Thursday, December 01, 2022 10:43 AM
To: Lefty Insider <lefty@tcw.org>
Subject: RE: FCC broadband maps question
Good points...our elected officials say that broadband should be treated as an essential utility.
But they don't want to regulate it like one.

From: Reporter [mailto: Reporter@jrn.com]
Sent: Thursday, December 01, 2022 10:49 AM
To: Lefty Insider <lefty@tcw.org>
Subject: RE: FCC broadband maps question
Yes, and I asked the FCC how they spent around $60 million on this map.

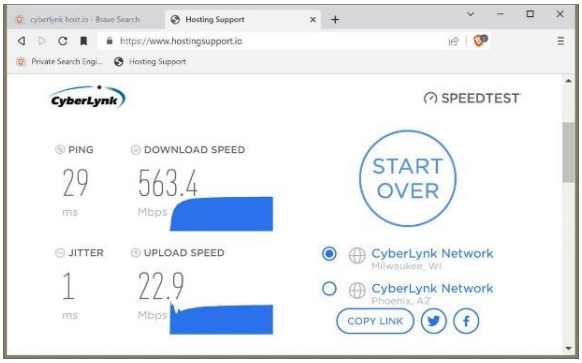
From: Lefty Insider <lefty@tcw.org>
Sent: Thursday, December 1, 2022 10:48 AM
To: Reporter <Reporter@jrn.com>
Subject: RE: FCC broadband maps question
So ask that question in your article?

From: Lefty Insider <lefty@tcw.org>
Sent: Monday, December 26, 2022 9:15 AM
To: Reporter <Reporter@jrn.com>
Subject: A good background on Broadband
Reporter,
Any luck getting your broadband story published yet?
This author co-created Vermeer Software and the FrontPage authoring software (which I used to create my first website, tcw.org) back in the day. He sold to Microsoft and is now called Expression Web which I use to this day.
The Broadband Problem Anatomy of a Market Failure and a Policy Dilemma Charles H. Ferguson
Lefty

From: Reporter [mailto: reporter@jrn.com]
Sent: Monday, December 26, 2022 9:57 AM
To: Lefty Insider <lefty@tcw.org>
Subject: RE: A good background on Broadband
Hello Lefty,
The most recent story, link below, was from Dec. 13.
I don't get as much time as I'd like to work on broadband stories but will have another one soon.
Reporter
https://www.jsonline.com/story/money/business/2022/12/13/new-fcc-broadband-map-allows-you-to-challenge-service-availability/69704357007/

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Tuesday, December 27, 2022 8:40 AM
To: ' Reporter' <Reporter@jrn.com>
Subject: RE: A good background on Broadband
Reporter,
Thanks for the link and the mention.
The previous book reference, while dated, explains the monopoly restrictions of broadband being used primarily to maintain the monopoly. It also going into great detail about the losses to our economy from this behavior. Previously I was only thinking about this in terms of what economic gains could occur with expansion.
PS. Donkey hobby farmer huh?
Lefty

From: Lefty Insider <lefty@tcw.org>
Sent: Thursday, January 5, 2023 2:37 PM
To: Reporter <reporter@jrn.com>
Subject: Holy Crap!
Reporter,
I just setup a new (old stock) MS Surface 7 Pro Plus Windows 10 wireless AX tablet and ran the speed tests below.
I cannot yet explain this.
Lefty



From: Reporter [mailto: reporter@jrn.com]
Sent: Thursday, January 05, 2023 4:22 PM
To: Lefty Insider <lefty@tcw.org>
Subject: RE: Holy Crap!
Those speeds are amazing, Lefty.
On a good day, I get 10/1 service at home.
For uploading large digital files, I start the upload before going to bed and check on it in the morning.
Sometimes it times out before finishing, and I have to start over.
My other option is to drive to Appleton or our office in Milwaukee where uploads are fast.
Working from home, I feel like I'm stuck in the 1990s.
That was okay then, but not now....
Reporter

From: Lefty Insider <lefty@tcw.org>
Sent: Wednesday, January 11, 2023 8:34 AM
To: Reporter <reporter@jrn.com>
Subject: And then there is this...

England Makes Gigabit Internet a Legal Requirement For New Homes (theverge.com) 45

Posted by BeauHD on Monday January 09, 2023 @05:00PM from the faster-the-better dept.
An anonymous reader quotes a report from The Verge: Amendments to Building Regulations 2010 were announced by the Department for Digital, Culture, Media, and Sport (DCMS) on January 6th that mandate new homes constructed in England to be fitted with infrastructure and connections required to achieve gigabit internet connectivity. Connection costs will be capped at £2,000 per home, and developers must still install gigabit-ready infrastructure (including ducts, chambers, and termination points) and the fastest-available connection if they're unable to secure a gigabit connection within the cost cap. The UK government estimates that 98 percent of installations will fall comfortably under that cap, so it's likely been put in place to avoid spiraling charging in remote, rural areas that need wide scale line upgrades. Properties constructed in Scotland, Wales, and Northern Ireland may be exempt from this new legislation as each country sets its own building regulations independently from England.
The new legislation was introduced on December 26th, 2022, following a 12-month technical consultation that indicated around 12 percent of 171,190 new homes constructed in England didn't have gigabit broadband access upon completion. DCMS claims that gigabit broadband is currently available in over 72 percent of UK households and is targeting full nationwide gigabit-capable broadband coverage across the UK by 2030. In order to meet that goal, another law has also been introduced to make it easier to install faster Internet connections into existing flats and apartments. Previously, millions of tenants living in the UK's estimated 480,000 multi-dwelling units (MDUs) needed to obtain permission from the landowner to allow a broadband operator to install connection upgrades. Broadband companies estimate that around 40 percent of these requests are ignored by landlords, leaving tenants unable to upgrade their services even if they're unfit for use. Now, the Telecommunications Infrastructure (Leasehold Property) Act 2021 (TILPA) allows broadband providers in England and Wales to seek access rights via court if landlords and land owners don't respond to installation requests within 35 days. "An additional 2,100 residential buildings a year are estimated to be connected to faster broadband speeds as a result of these new rules, and similar legislation is due to come into force in Scotland later this year," adds the report. "The existing appeals process that allows landlords to refuse access requests will not be affected."

From: Reporter [mailto: reporter@jrn.com]
Sent: Wednesday, January 11, 2023 8:40 AM
To: Lefty Insider <lefty@tcw.org>
Subject: RE: And then there is this...
Wow, that would certainly shake things up here!
Reporter

From: Reporter [mailto: reporter@jrn.com]
Sent: Wednesday, January 11, 2023 4:45 PM
To: Lefty Insider <lefty@tcw.org>
Subject: RE: Download speeds
Yes, upload speeds have become increasingly important – maybe even more so than downloads – as people use IOT devices and work from home. I'm weary of timing my uploads to run overnight and hope they don't stall out in the process.
I like the idea of writing something specific on uploads, although my editor might argue that it's a bit too narrow in focus.
Maybe a way to approach it would be if people want to keep adding home security cameras, smart plugs, and more, uploads are the weak link...

From: Lefty Insider <lefty@tcw.org>
Sent: Wednesday, January 11, 2023 3:45 PM
To: Reporter <reporter@jrn.com>
Subject: FW: Download speeds
From my web and email hosting ISP.

From: [mailto:support@cyberlynk.net]
Sent: Monday, January 09, 2023 8:19 AM
To: 'Lefty Insider' <lefty@tcw.org>
Subject: RE: web hosting
Those are some crazy speeds. Thank you for fighting for the little guys. Now maybe you could work on the upload speeds with these providers. Its 2023 and they are still limiting upload speeds.

I just setup a new, old stock, Surface 7 Pro Plus tablet with Win10 and Intel Wi-Fi 6 AX201 160MHz wireless.
After giving Spectrum a hard time a few years ago, this is what I am seeing now, in part because of the Wi-Fi 6 and in part because of the Brave browser, versus Firefox/Pale Moon/IE. And perhaps they have made some changes to their network infrastructure.

https://fast.com/ Chicago 710 Mbps
https://www.hostingsupport.io/ Franklin, WI 563 Mbps
https://www.speedtest.net/ Random Lake, WI 562 Mbps

This is faster than a 1000 Mbps Ethernet connection on another machine. Also with Brave.
What do you think of this?
Lefty

From: Reporter [mailto: reporter@jrn.com]
Sent: Thursday, January 12, 2023 9:34 AM
To: Lefty Insider <lefty@tcw.org>
Subject: RE: Follow up
Good examples!
And some of the Chinese gadgets give the manufacturers creepy access to your computer.
Reporter

From: Lefty Insider <lefty@tcw.org>
Sent: Thursday, January 12, 2023 9:30 AM
To: Reporter <reporter@jrn.com>
Subject: Follow up

"People who add all these surveillance devices to their homes are idiots."
Here is a little story I wrote on this subject.
https://www.tcw.org/lefty/Short Stories/While you were away.pdf

Here are some examples of that idiotocracy.
'Please Don't Film Me in 2023' (theverge.com) 161
Posted by EditorDavid on Sunday January 08, 2023 @03:43PM from the unpaid-work dept.
Meet the Spy Tech Companies Helping Landlords Evict People (vice.com) 262
Posted by BeauHD on Thursday January 05, 2023 @10:30PM from the behind-the-scenes dept.
Swatters Used Ring Cameras To Livestream Attacks, Taunt Police, Prosecutors Say (arstechnica.com)
Posted by BeauHD on Monday December 19, 2022 @10:30PM from the fun-is-over dept.
Anker's Eufy Cameras Caught Uploading Content To the Cloud Without User Consent (macrumors.com) 33
Posted by BeauHD on Tuesday November 29, 2022 @05:25PM from the unauthorized-uploading dept.
Ring Cameras Are Being Used To Control and Surveil Overworked Delivery Workers (vice.com)
Posted by BeauHD on Thursday October 20, 2022 @10:30PM from the always-watching dept.
But wait, there's more:

Intimate Photos By Roomba Vacuums Leaked Online (futurism.com)

> *Posted by BeauHD on Wednesday December 21, 2022 @05:40PM from the consumer-privacy-scares dept.*
> *schwit1 shares a report from Futurism: Your robot vacuums are watching you -- and the resulting imagery of your most private moments can, horrifically, get leaked online. As the MIT Technology Review reports, the aptly-named company iRobot, behind the uber-popular Roomba vacuums, confirmed that gig workers outside of the US broke a non-disclosure agreement when sharing intimate photos, including one of a woman on the toilet, to social media.*
> *The images in question, some of which MIT Tech shared -- though thankfully not the bathroom one -- were snapped by the vacuums for the purpose of data annotation, the process in which humans confirm or deny whether AI has accurately labeled things correctly. While the data annotation process is integral to Roomba-style vacuums and other AI-enabled robotics, most people are unaware of the process, though iRobot claimed in its responses to MIT Tech that the leaked images came from development robots that had a bright green label that said "video recording in process."*

Roomba Testers Feel Misled After Intimate Images Ended Up on Facebook (technologyreview.com)

Posted by msmash on Tuesday January 10, 2023 @02:20PM from the closer-look dept.
An investigation recently revealed how images of a minor and a tester on the toilet ended up on social media. iRobot said it had consent to collect this kind of data from inside homes -- but participants say otherwise. From a report: When Greg unboxed a new Roomba robot vacuum cleaner in December 2019, he thought he knew what he was getting into. He would allow the preproduction test version of iRobot's Roomba J series device to roam around his house, let it collect all sorts of data to help improve its artificial intelligence, and provide feedback to iRobot about his user experience. He had done this all before. Outside of his day job as an engineer at a software company, Greg had been beta-testing over 50 products for the past decade. He's tested everything from sneakers to smart home cameras.
But what Greg didn't know -- and does not believe he consented to -- was that iRobot would share test users' data in a sprawling, global data supply chain, where everything (and every person) captured by the devices' front-facing cameras could be seen, and perhaps annotated, by low-paid contractors outside the United States who could screenshot and share images at their will. Greg, who asked that we identify him only by his first name because he signed a nondisclosure agreement with iRobot, is not the only test user who feels dismayed and betrayed. Nearly a dozen people who participated in iRobot's data collection efforts between 2019 and 2022 have come forward in the weeks since MIT Technology Review published an investigation into how the company uses images captured from inside real homes to train its artificial intelligence. The participants have shared similar concerns about how iRobot handled their data -- and whether those practices conform with the company's own data protection promises. After all, the agreements go both ways, and whether or not the company legally violated its promises, the participants feel misled.

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Saturday, January 14, 2023 10:24 AM
To: 'Reporter' <reporter@jrn.com>
Subject: Download speeds continued
Reporter,
Adding on to this previous message…
A newspaper article could show the relative lack of progress in the telecom industry compared to say the computer industry, or automotive industry not encumbered by monopoly motives and behavior. The loss of GDP is massive. This, rather than trying to show potential events that may have speculatively happened due to increased bandwidth availability i.e. new businesses, expansions, innovations, etc..
Unlike T1/T3's, or DSL, or broadband wireless, (discrete network connections) cable Internet connections are _*shared*_ across a neighborhood area. Spectrum says that there are 210 devices on ***my local node***. I currently have ten of those. ☺
Cable will also have varying bandwidth because of RF (radio frequency) congestion on the HFC. (Hybrid fiber-coaxial (HFC) is a broadband network that combines optical fiber and coaxial cable.) This is different from FTH or fiber to the home. HFC is fiber to a neighborhood box, and then coax cable to your house, which cheaper for the ISP but is not as good for the customer.
Spectrum **business** offers 300/600/1000 at higher prices.
https://www.spectrum.com/business/insights/technology/business-vs-residential-internet-whats-the-difference/ (see the comment at the end)
https://www.youtube.com/watch?v=unfxGCI6l84
"Upload speeds are important for avoiding interruptions with large-file downloads and backups, VoIP service, videoconferences, and running cloud-based applications. If your business needs these services, you may run into trouble with Spectrum's cable Internet plans."
https://www.business.org/services/internet/spectrum-business-internet-review/ (much more info on this page)

Plan	Starting price (per month)	Max download speed	Max upload speed
Spectrum Internet (200 Mbps)	$49.99	Up to 200 Mbps (wireless speeds may vary)	35 Mbps
Spectrum Internet Ultra	$94.99	Up to 600 Mbps (wireless speeds may vary)	35 Mbps
Spectrum Internet Gig	$149.99	Up to 1,000 Mbps (wireless speeds may vary)	35 Mbps

https://www.reviews.org/internet-service/what-is-symmetrical-internet/

The stuttering and dropped connections you see on the cable news talking heads are mostly due to poor upload speeds or cellular connections rather than Wi-Fi problems.
Food for thought,
Lefty

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Thursday, January 12, 2023 9:14 AM
To: 'Reporter' <reporter@jrn.com>
Subject: RE: Download speeds
Reporter,
The issue with uploads (ISP's call it backhaul) is the Time Warner cable, Comcast, etc., system was designed to be one way. To deliver cable TV to homes, with very little data moving back, hence the 20 Mbps up speed on a 500 Mbps connection, and 40 Mbps up on a 1000 Mbps connection.
They are still using the same equipment to deliver TV this way almost thirty years later. Although they are pushing people off of cable and to the web.
They would need to update their equipment for more backhaul and it would maybe interfere with delivering cable TV. (remember Spectrum, Comcast, etc. also buy their Internet connections (middlemen) from others and it would cost them more to do this.
People who add all these surveillance devices to their homes are idiots.
Social media requires uploads, but those people are idiots as well in my view.

This is where the real need is:
Video conference calls on Zoom, Skype, FaceTime, etc.
Gaming online
VPN into work, working from home
Submitting homework, and learning from home in general
Voice over IP phone calling

I would like to see you (us) push this agenda forward,
Lefty

PS. I have sent an email, like the one I sent you, to:
rep.allen@legis.wisconsin.gov; rep.anderson@legis.wisconson.gov; rep.august@legis.wisconsin.gov; rep.ballweg@legis.wisconsin.gov; rep.barca@legis.wisconsin.gov; rep.berceau@legis.wisconsin.gov; rep.bernier@legis.wisconsin.gov; rep.billings@legis.wisconsin.gov; rep.born@legis.wisconsin.gov; rep.bowen@legis.wisconsin.gov; rep.brandtjen@legis.wisconsin.gov; rep.brooks@legis.wisconsin.gov; rep.rob.brooks@legis.wisconsin.gov; rep.brostoff@legis.wisconsin.gov; rep.considine@legis.wisconsin.gov; rep.crowley@legis.wisconsin.gov; rep.doyle@legis.wisconsin.gov; rep.duchow@legis.wisconsin.gov; rep.edming@legis.wisconsin.gov; rep.felzkowski@legis.wisconsin.gov; rep.fields@legis.wisconsin.gov; rep.genrich@legis.wisconsin.gov; rep.goyke@legis.wisconsin.gov; rep.gundrum@legis.wisconsin.gov; rep.hebl@legis.wisconsin.gov; rep.hesselbein@legis.wisconsin.gov; rep.horlacher@legis.wisconsin.gov; rep.hutton@legis.wisconsin.gov; rep.jacque@legis.wisconsin.gov; rep.jagler@legis.wisconsin.gov; rep.jarchow@legis.wisconsin.gov; rep.katsma@legis.wisconsin.gov; rep.kerkman@legis.wisconsin.gov; rep.kessler@legis.wisconsin.gov; rep.kitchens@legis.wisconsin.gov; rep.kleefisch@legis.wisconsin.gov; rep.knodl@legis.wisconsin.gov; rep.kolste@legis.wisconsin.gov; rep.kooyenga@legis.wisconsin.gov; rep.kremer@legis.wisconsin.gov; rep.krug@legis.wisconsin.gov; rep.kuglitsch@legis.wisconsin.gov; rep.kulp@legis.wisconsin.gov; rep.loudenbeck@legis.wisconsin.gov; rep.macco@legis.wisconsin.gov; rep.meyers@legis.wisconsin.gov; rep.milroy@legis.wisconsin.gov; rep.murphy@legis.wisconsin.gov; rep.mursau@legis.wisconsin.gov; rep.nerison@legis.wisconsin.gov; rep.neubauer@legis.wisconsin.gov; rep.neylon@legis.wisconsin.gov; rep.novak@legis.wisconsin.gov; rep.nygren@legis.wisconsin.gov; rep.ohnstad@legis.wisconsin.gov; rep.ottj@legis.wisconsin.gov; rep.petersen@legis.wisconsin.gov; rep.petryk@legis.wisconsin.gov; rep.plumer@legis.wisconsin.gov; rep.pope@legis.wisconsin.gov; rep.pronschinske@legis.wisconsin.gov; rep.quinn@legis.wisconsin.gov; rep.riemer@legis.wisconsin.gov; rep.rodriguez@legis.wisconsin.gov; rep.rohrkaste@legis.wisconsin.gov; rep.sanfelippo@legis.wisconsin.gov; rep.sargent@legis.wisconsin.gov; rep.schraa@legis.wisconsin.gov; rep.shankland@legis.wisconsin.gov; rep.sinicki@legis.wisconsin.gov; rep.skowronski@legis.wisconsin.gov; rep.snyder@legis.wisconsin.gov; rep.spiros@legis.wisconsin.gov; rep.spreitzer@legis.wisconsin.gov; rep.stafsholt@legis.wisconsin.gov; rep.steffen@legis.wisconsin.gov; rep.steineke@legis.wisconsin.gov; rep.stuck@legis.wisconsin.gov; rep.subeck@legis.wisconsin.gov; rep.summerfield@legis.wisconsin.gov; rep.swearingen@legis.wisconsin.gov; rep.tauchen@legis.wisconsin.gov; rep.taylor@legis.wisconsin.gov; rep.thiesfeldt@legis.wisconsin.gov; rep.tittl@legis.wisconsin.gov; rep.tranel@legis.wisconsin.gov; rep.tusler@legis.wisconsin.gov; rep.vandermeer@legis.wisconsin.gov; rep.vorpagel@legis.wisconsin.gov; rep.vos@legis.wisconsin.gov; rep.vruwink@legis.wisconsin.gov; rep.wachs@legis.wisconsin.gov; rep.weatherston@legis.wisconsin.gov; rep.wichgers@legis.wisconsin.gov; rep.youngl@legis.wisconsin.gov; rep.zamarripa@legis.wisconsin.gov; rep.zepnick@legis.wisconsin.gov; rep.zimmerman@legis.wisconsin.gov; Sen.Bewley@legis.wisconsin.gov; Rep.Hintz@legis.wisconsin.gov; sen.bewley@legis.wi.gov; sen.carpenter@legis.wisconsin.gov; sen.cowles@legis.wisconsin.gov; sen.craig@legis.wisconsin.gov; sen.darling@legis.wisconsin.gov; sen.erpenbach@legis.wisconsin.gov; sen.feyen@legis.wi.gov; sen.fitzgerald@legis.wisconsin.gov; sen.frostman@legis.wisconsin.gov; sen.hansen@legis.wisconsin.gov; sen.johnson@legis.wisconsin.gov; sen.kapenga@legis.wisconsin.gov; sen.larson@legis.wisconsin.gov; sen.lemahieu@legis.wisconsin.gov; sen.marklein@legis.wis.gov; sen.miller@legis.wisconsin.gov; sen.moulton@legis.wisconsin.gov; sen.nass@legis.wisconsin.gov; sen.olsen@legis.wisconsin.gov; sen.petrowski@legis.wisconsin.gov; sen.ringhand@legis.wi.gov; sen.risser@legis.wisconsin.gov; sen.roth@legis.wisconsin.gov; sen.schachtner@legis.wisconsin.gov; sen.shilling@legis.wisconsin.gov; sen.stroebel@legis.wisconsin.gov; sen.taylor@legis.wisconsin.gov; sen.testin@legis.wi.gov; sen.tiffany@legis.wi.gov; sen.vinehout@legis.wisconsin.gov; sen.vukmir@legis.wisconsin.gov; sen.wanggaard@legis.wisconsin.gov; sen.wirch@legis.wisconsin.gov;

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Monday, January 16, 2023 9:37 AM
To: 'Reporter' <reporter@jrn.com>
Subject: RE: Download speeds continued
Reporter,
I am not particularly good at math, but this is what I came up with:
I started at 2400bps thirty years ago to 400Mbps now.(16,666,566 % increase). I personally think that this is massive, what really is remarkable and more useful is my computers going from a 4Mhz to a 4Ghz processor (99,900%) in that same time frame.
What many people miss is an imagination for what could be. (like the guy in the video who cannot imagine needing faster upload speeds)
In 1995 did people think that faster downloads would bring streaming movies and music? Nope.
Did they imagine ChatGPT or stablediffustinweb?
What new technologies and services will faster uploads bring? What new technological inventions and businesses?
Why is it OK to artificially throttle half of an Internet connection?
Btw, if you have a smartphone and set it up as a Wi-Fi hotspot, how fast is your Internet connection?
Or are you stuck at 3G? Lefty

From: Reporter [mailto: reporter@jrn.com]
Sent: Monday, January 16, 2023 7:57 AM
To: Lefty Insider <lefty@tcw.org>
Subject: RE: Download speeds continued
Good morning, Lefty
I like your idea about comparing progress in telecom to automotive and other industries.
They're far from perfect, but new cars are much better now than they were 20 years ago.
Many people couldn't say that about their broadband connection.
Thanks for sending this my way.
Reporter

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Monday, January 16, 2023 6:24 PM
To: 'Reporter' <reporter@jrn.com>
Subject: Rockdale broadband wireless connection
Reporter,
I just happened to think of this info today. Hopefully it will be of some use to you.
After paying for them upgrading the equipment at my tower for a couple of years, I basically told them to cut the cost (now that the equip. is paid for) or increase the speed. They chose the latter and it looked like this:

Invoice	Item	Quantity	Description	Price	Total
618233					
	SVC#831	1	5/1/2017 to 6/1/2017 -- Business Starter Gold	108.90	108.90
	SVC#783	1	5/1/2017 to 6/1/2017 -- Total Protection Plan	15.00	15.00
	SVC#129	1	5/1/2017 to 6/1/2017 -- Static IP Qty 1 MNTH	10.00	10.00
	SVC#864	1	5/1/2017 to 6/1/2017 -- Home LAN Extension	20.00	20.00
	TAX#1	1	Wisconsin Sales Tax ($153.90 x 5%)	7.70	7.70
	TAX#76	1	County Sales Tax 53523 ($153.90 x 0.5%)	0.77	0.77
				Total	162.37
				Paid	0.00
				Due	162.37

I had an antenna on my shop/office building, and then a repeater that shot a signal to the house on a separate IP address. So two distinct networks, for security and redundancy.
The ISP antenna that was line of sight to mine was on top of a Rockdale grain bin elevator. That signal came from the water tower antenna in Cambridge, which came from the antenna in Lake Mills, and then from an antenna in Johnson Creek, which where it connected to I94 routed fiber originating in Milwaukee. Whew!
You can run a tracert (or install free Open Visual Traceroute) command from a command prompt to see where your packets travel.
Details below,
Lefty

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Wednesday, April 27, 2016 9:14 AM
To: 'Support' <support@netwurx.net>
Cc: 'Support' <Support@netwurx.net>
Subject: RE: Fwd.: Rockdale wireless connection

Support,
Thanks for taking the time to respond to my inquiry.
According to speedtest.net this morning, my down speed has increased to 4.5, but the up has decreased to 1.5. Seems like 1.5 Mbps went from one side to the other.
I spoke with you about two years ago about your company upgrading your backhauls, and my monthly cost coming down to a more competitive level over time.
I am not particularly concerned about the up speed as I only occasionally upload stuff to a website, or send large emails.
One of the things I have been doing for more than a year now is testing Windows 10 builds and those downloads can render my connection completely useless to do anything else with for many hours at a time. Btw, Windows 10 still sucks pretty badly and I do not recommend using it for anything productive.
Looking at satellite, I can get 15 down and 2 up for $50 less per month. For a retired guy on SS, $50 a month is a lot of money.
Can you cut my monthly price by $50 until November?
Lefty

From: Support [mailto: Support@netwurx.net]
Sent: Tuesday, April 26, 2016 4:31 PM
To: lefty@tcw.org
Cc: Support <Support@netwurx.net>; Support@netwurx.net
Subject: Re: Fwd.: Rockdale wireless connection
Lefty,
I would love to upgrade your circuit but I need to be careful. Your segment has not yet been upgraded to the new gear and I need to make sure not to overload the network and hurt everyone right before we bring new life to everyone.
Some of the Backhauls between towers are older and only capable of 12 to 20 megs. Your tower is one of those. Although your last mile gear is capable of far greater, its the backhauls I worry about in this case. I can say this. I just looked at the upgrade plans and your tower is scheduled for later this year (probably November). (All the towers before it have to be upgraded first so they can feed Rockdale) When the upgrade is done, You will switch to new equipment (Canopy 450 in 3.65Ghz). This new last mile gear will make Rockdale a gold tower, At that time you will get automatically upgraded to a 15Meg by 10Meg. If you go up to $199 a month, You would go to a 20Meg by 15Meg. The Rockdale tower will have a 300Meg connection
I believe I can squeak a little more out of your connection now and I am going to up it to 7Megs down but I am stuck at the 3Meg up. I promise we are doing our best to make your connection the bomb as quickly as possible. Just hold on a tiny bit longer. ITS COMING!

---------- Forwarded message ----------
From: Lefty Insider <lefty@tcw.org>
Date: Fri, Apr 22, 2016 at 11:28 AM
Subject: Rockdale wireless connection
To: Support@netwurx.net
Support,
When I got this connection a few years ago, we talked about bring the price down over time once the system was established and you had an opportunity to add additional customers. Since you are offering greater speeds to other customers, I could like to see my speed increase from 3 Mbps to 6 Mbps or the monthly price come down from $170 to a more competitive rate closer to $100.
Thanks,
Lefty

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Saturday, January 21, 2023 9:27 AM
To: 'Reporter' <reporter@jrn.com>
Subject: Of course they are

Telecom Giants Head To Court To Kill NY State's Demand They Give Poor People $15 Broadband (techdirt.com) 57

Posted by msmash on Friday January 20, 2023 @01:41PM from the new-lows dept.
Karl Bode, reporting for TechDirt: Recently, New York State passed a new law demanding that regional broadband providers (Verizon, Charter Spectrum, and Altice) provide low-income consumers $15, 25 Mbps broadband tiers to help them survive COVID. The goal: to try and help struggling Americans afford the high cost of broadband during an historic health crisis. Under the proposal ISPs are also allowed to offer $20, 200 Mbps tiers, with any price increases capped at two percent per year. U.S. Regulators engaging in anything even close to price regulation of regional monopolies is, again, said monopolies' worst nightmare.
As a result, the broadband industry quickly sued New York, insisting that the state is forbidden from passing such a law thanks in part to the Trump administration's net neutrality repeal (which basically attempted to lobotomize state consumer protection authority in addition to killing popular net neutrality rules). As the case heads to court, it could have broader implications for other state efforts to mandate lower costs for consumers (in times of crisis or not): "The industry fear is that other states might impose requirements far more onerous than what New York requires, such as by further lowering the price, raising the speed requirements, or expanding the eligibility pool to make broadband affordable for middle-class customers," added Levin.

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Monday, January 23, 2023 8:22 AM
To: 'Reporter' <reporter@jrn.com>
Subject: Restoration of US Net Neutrality

FCC Nomination Stalled for One Year, Preventing Restoration of US Net Neutrality (siliconvalley.com)

Posted by EditorDavid on Saturday January 21, 2023 @12:34PM from the confirmations-bias dept.
Why hasn't America restored net neutrality protections? "President Biden's nomination to serve on the Federal Communications Commission has been stalled in the Senate for more than a year," complain the editorial boards of two Silicon Valley newspapers: Confirming Gigi Sohn would end the 2-2 deadlock on the FCC that is keeping Biden from fulfilling his campaign promise to restore net neutrality, ensuring that all Internet traffic is treated equally. Polls show that 75% of Americans support net neutrality rules. They know that an open Internet is essential for innovation and economic growth, for fostering the next generation of entrepreneurs....
Telecommunication giants such as AT&T, Verizon and Comcast don't want that to happen. They favor the status quo that allows the Internet companies to pick winners and losers by charging content providers higher rates for speedier access to customers. They seek to expand the cable system model and allow kingmakers to rake in billions at the expense of smaller, new startups that struggle to gain a wider audience on their slow-speed offerings. So Republicans and a handful of Democrats are holding up Sohn's confirmation, claiming that her "radical" views disqualify her....
They also object to Sohn's current service as an Electronic Frontier Foundation board member, saying it proves she wouldn't be an unbiased and impartial FCC Commissioner. The San Francisco-based EFF is a leading nonprofit with a mission of defending digital privacy, free speech and innovation....
Enough is enough. Confirm Sohn and allow the FCC to fulfill its mission of promoting connectivity and ensuring a robust and competitive Internet market.

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Tuesday, January 31, 2023 10:58 AM
To: 'Reporter' <reporter@jrn.com>
Subject: Frontier's Bringing Its 5-Gig Fiber Network Across the Country

Frontier's Bringing Its 5-Gig Fiber Network Across the Country 36

Posted by BeauHD on Monday January 30, 2023 from the new-and-improved dept.
Frontier, an Internet service provider (ISP) that services 25 US states, has just launched 5 Gig fiber internet service across its entire network. The Verge reports: Frontier launched 2 Gig fiber Internet service less than a year ago, and the 5 Gig plan is currently available in all of Frontier's fiber-connected markets, with no phased rollouts. Compared to the cable-bound Internet that most of us are familiar with, Frontier's 5 Gig Internet is reported to have upload speeds that are up to 125 times faster and up to five times faster downloads, all delivered with less latency. The new 5 Gig network is one of the fastest Internet options currently available in the US, with other fiber-enabled ISPs like Verizon Fios and Google Fiber still capped at around 2Gbps.
Right now, the only other 5 Gig network currently available in the US is through AT&T, which offers 2 Gig and 5 Gig plans. Google Fiber is also slated to add 5-gig and 8-gig plans to its lineup sometime this year, despite its numerous setbacks.

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Friday, February 03, 2023 10:05 AM
To: 'Reporter' <reporter@jrn.com>
Subject: When performance gets measured, people start lying and cheating

ISP Admits Lying To FCC About Size of Network To Block Funding To Rivals (arstechnica.com)

Posted by msmash on Friday February 03, 2023 @10:21AM from the closer-look dept.
Ryan Grewell, who runs a small wireless Internet service provider in Ohio, last month received an email that confirmed some of his worst suspicions about cable companies. From a report: Grewell, founder and general manager of Smart Way Communications, had heard from some of his customers that the Federal Communications Commission's new broadband map falsely claimed fiber Internet service was available at their homes from another company called Jefferson County Cable. Those customer reports spurred Grewell to submit a number of challenges to the FCC in an attempt to correct errors in Smart Way's service area.
One of Grewell's challenges elicited a response from Jefferson County Cable executive Bob Loveridge, who apparently thought Grewell was a resident at the challenged address rather than a competitor. "You challenged that we do not have service at your residence and indeed we don't today," Loveridge wrote in a January 9 email that Grewell shared with Ars. "With our huge investment in upgrading our service to provide xgpon we reported to the BDC [Broadband Data Collection] that we have service at your residence so that they would not allocate addition [sic] broadband expansion money over [the] top of our private investment in our plant."
The email is reminiscent of our November 2022 article about a cable company accidentally telling a rival about its plan to block government grants to competitors. Speaking to Ars in a phone interview, Grewell said, "This cable company happened to just say the quiet part out loud." He called it "a blatant attempt at blocking anyone else from getting funding in an area they intend to serve." It's not clear when Jefferson County Cable plans to serve the area. Program rules do not allow ISPs to claim future coverage in their map submissions. Jefferson County Cable ultimately admitted to the FCC that it filed incorrect data and was required to submit a correction. The challenge that the ISP conceded was for an address on State Route 43 in Bergholz, Ohio. The town is not one of the coverage areas listed on Jefferson County Cable's website.

From: Reporter [mailto: reporter@jrn.com]
Sent: Friday, February 03, 2023 10:13 AM
To: Lefty Insider <lefty@tcw.org>
Subject: RE: Alert: Security Issue With Your Internet Account
Good morning, Lefty
Thanks for sending these my way.
I'm being pulled away from broadband coverage for a month or so to focus on some other topics.
But I will hang on to all this and circle back with you as soon as I can.
I appreciate all your help!
Reporter

From: Lefty Insider <lefty@tcw.org>
Sent: Friday, February 3, 2023 10:09 AM
To: Reporter <reporter@jrn.com>
Subject: FW: Alert: Security Issue With Your Internet Account
Reporter,
How very nonspecific can they be. Seems like a marketing ploy.
Some believe that they want you to uninstall all of your AV stuff and install theirs and then later will come a monthly subscription charge.
Oh, and they threw in an implied threat just for fun, or perhaps motivation to see it their way.
PS. Their bot scanner found nothing on this particular machine but MB found 25 pups which I quarantined. Those are not bots however.
Lefty

From: Spectrum [mailto:abuse@charter.com]
Sent: Thursday, February 02, 2023 9:24 AM
To: Lefty@tcw.org
Subject: Alert: Security Issue With Your Internet Account

Alert: Security Issue With Your Internet Account

Dear Lefty,

Spectrum has been notified of a potential security issue with your Internet service.

Account Information	
Account Number:	**xxxx
Date:	February 02, 2023

A device using your network may be infected by malicious software often disguised as a legitimate program or file. The infected device could be any computer, tablet, mobile device, set-top box (i.e., Firestick), smart home device, security camera or gaming console connected to your network.

Recommendations

- Update anti-malware, firewall and antivirus software on computers, tablets and mobile devices.

- Run a full anti-virus system scan on each device that uses your Spectrum Internet connection.
- Use a tool such as the Spectrum AntiBot Scanner and/or other bot removal scans in conjunction with your anti-virus software to remove any malware.
- The Spectrum AntiBot Scanner can be located at Spectrum.net/security
- Consider taking your computers, tablets and mobile devices to a repair professional.
- Update all operating systems that run on your devices (i.e., Windows, Apple OS, Linux Distro or Android).
- Make sure that all routers, modems, cameras, set-top boxes, smart home devices and gaming consoles are updated.
- Change passwords to email accounts, banking and other financial sites **after** the device has been cleared of any virus or malware.

Please be advised that Spectrum's Acceptable Use Policy prohibits actions, whether intentional or unintentional, that disrupt our network. To view these policies, visit Spectrum.com/policies/terms-of-service

Thank you for choosing Spectrum,
Spectrum Support Team

Please do not reply to this message. Replies to this message are routed to an unmonitored mailbox. If we can be of further assistance, please visit Spectrum Support

This email was sent to: LEFTY@TCW.ORG
If you received this email in error, please let us know
©2023 Charter Communications. All rights reserved |Privacy Policy
This message was sent by Charter Communications

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Wednesday, February 08, 2023 3:05 PM
To: 'Reporter' <reporter@jrn.com>
Subject: There is a story here
Reporter,
More fuel for my last story idea, below and attached.
If the role of a newspaper is to inform the public, then it is abundantly obvious that people need informing.
Lefty

Few Americans Understand How Online Tracking Works, Finds Report 58

Posted by BeauHD on Tuesday February 07, 2023 from the surprise-surprise dept.

An anonymous reader quotes a report from The New York Times: Many people in the United States would like to control the information that companies can learn about them online. Yet when presented with a series of true-or-false questions about how digital devices and services track users, most Americans struggled to answer them, according to a report published (PDF) on Tuesday by the Annenberg School for Communication at the University of Pennsylvania. The report analyzed the results of a data privacy survey that included more than 2,000 adults in the United States. Very few of the respondents said they trusted the way online services handled their personal data. The survey also tested people's knowledge about how apps, websites and digital devices may amass and disclose information about people's health, TV-viewing habits and doorbell camera videos. Although many understood how companies can track their emails and website visits, a majority seemed unaware that there are only limited federal protections for the kinds of personal data that online services can collect about consumers.

Seventy-seven percent of the participants got nine or fewer of the 17 true-or-false questions right, amounting to an F grade, the report said. Only one person received an A grade, for correctly answering 16 of the questions. No one answered all of them correctly. Seventy-nine percent of survey respondents said they had "little control over what marketers" could learn about them online, while 73 percent said they did not have "the time to keep up with ways to control the information that companies" had about them. "The big takeaway here is that consent is broken, totally broken,"Joseph Turow, a media studies professor at the University of Pennsylvania who was the lead author of the report, said in an interview. "The overarching idea that consent, either implicit or explicit, is the solution to this sea of data gathering is totally misguided -- and that's the bottom line."

The survey results challenge a data-for-services trade-off argument that the tech industry has long used to justify consumer tracking and to forestall government limits on it: Consumers may freely use a host of convenient digital tools -- as long as they agree to allow apps, sites, ad technology and marketing analytics firms to track their online activities and employ their personal information. But the new report suggests that many Americans aren't buying into the industry bargain. Sixty-eight percent of respondents said they didn't think it was fair that a store could monitor their online activity if they logged into the retailer's Wi-Fi. And 61 percent indicated they thought it was unacceptable for a store to use their personal information to improve the services they received from the store. Only a small minority -- 18 percent -- said they did not care what companies learned about them online. "When faced with technologies that are increasingly critical for navigating modern life, users often lack a real set of alternatives and cannot reasonably forgo using these tools," Lina M. Khan, the chair of the Federal Trade Commission, said in a speech (PDF) last year.

In the talk, Ms. Khan proposed a "type of new paradigm" that could impose "substantive limits" on consumer tracking.

https://www.asc.upenn.edu/sites/default/files/2023-02/Americans_Can't_Consent.pdf

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Wednesday, February 08, 2023 10:12 AM
To: 'Reporter' <reporter@jrn.com>
Subject: FW: More evil and another reason to disconnect your PC from MS

Reporter,
There is a story here.
Lefty

From: Cool Hand [mailto: coolhand@ProDigitalSoftware.com]
Sent: Wednesday, February 08, 2023 7:50 AM
To: 'Lefty Insider' <lefty@tcw.org>
Subject: RE: More evil and another reason to disconnect your PC from MS

At this point what can we possibly do? They've already changed the culture so that such scans are not only possible, but welcomed: Virtually everyone now says "for security reasons, you always need to keep your system up to date", and Microsoft Update is the only game in town for PC users.

Windows 10 ensures that most folks now have to rely on at least some Apps (Skype? Zoom? Teams? Office? Even Windows Defender?), which update themselves outside of Windows Update and just run all the time doing who knows what. I run a tight ship here yet I start with 130 processes after bootup. Work a day and I find there are now 145 to 150 processes running, even when I close everything I used. How do we even know what's going on? The other day I found a process just looping (by blind luck; I couldn't even tell that 1 of my 64 logical processors was used up). I logged off/on and it was gone. Just now when typing this Outlook lost focus out of the blue, and I know it wasn't a typo. What did that? I can't say.

Yet we're expected to function; to do work - not to just use our brainpower up fighting against what we don't know about.

With Win 7 we could configure a system to be clean. With just a few settings almost all attempts to contact the outside world could be quelled. Add an active firewall and even the system's own attempts to contact Microsoft could be just shut off. God, I miss the good old days.

With Win 8.1 it was still possible, but it literally took MONTHS to find all the things to tweak, and the active firewall started working hard, especially with things like communications applications running (and who didn't need email, the ability to chat or video conference with others, etc.). Managing the firewall became more difficult as new things would just fail as new application software became more "world-aware".

Now with Win 10 and the most powerful machines we've ever had - which we NEED because so much software tries to use up our resources - it's already virtually impossible (and rapidly growing even more so) to keep track of all the communications, all the "handy services", all the background crap going on, even WITH those months of tweaking… Managing an active firewall is impossible - I tried. All I did was try to keep up with everything new that tried to connect to online resources, and ultimately stuff just didn't work - and worse, got into states where it could not be restored because, security. "Your system was detected behaving unexpectedly so was disabled". I actually had to de-configure some of my additional browser security settings just to be able to get onto my work network via VPN link.

If your "computing needs" have expanded - lord knows mine have, after joining Adobe - there is literally no way to actively keep a computer system squeaky clean and sanitary. So here we are, in the future we predicted, where with even the best of us doing all we know how to do we can only just feel like everything's out of control and getting worse by the nanosecond. I can still get work done, but for how long?

So… How's your day going so far, Lefty?

COOL HAND

From: Lefty Insider <lefty@tcw.org>
Sent: Tue, February 7, 2023 11:35 AM
To: COOLHAND@ProDigitalSoftware.com
Subject: More evil and another reason to disconnect your PC from MS
"scan Windows systems to smoke out those Office versions that are no longer supported or nearing the end of support."
To what end then, one might ask.

Microsoft Swears It's Not Coming For Your Data With Scan For Old Office Versions (theregister.com)

> *Posted by msmash on Monday February 06, 2023 @01:40PM from the closer-look dept.*
> *Microsoft wants everyone to know that it isn't looking to invade their privacy while looking through their Windows PCs to find out-of-date versions of Office software. From a report: In its KB5021751 update last month, Microsoft included a plan to scan Windows systems to smoke out those Office versions that are no longer supported or nearing the end of support. Those include Office 2007 (which saw support end in 2017) and Office 2010 (in 2020) and the 2013 build (this coming April). The company stressed that it would run only one time and would not install anything on the user's Windows system, adding that the file for the update is scanned to ensure it's not infected by malware and is stored on highly secure servers to prevent unauthorized changes to it.*
> *The update caused some discussion among users, at least enough to convince Microsoft to make another pitch that it is respecting user privacy and won't access private data despite scanning their systems. The update collects diagnostic and performance data so that it can determine the use of various versions of Office and how to best support and service them, the software maker wrote in an expanded note this week. The update will silently run once to collect the data and no files are left on the user's systems once the scan is completed.*

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Saturday, February 11, 2023 8:07 AM
To: 'Reporter' <reporter@jrn.com>
Subject: And then more lying
Comcast Gave False Map Data To FCC (arstechnica.com) 77

> *Posted by msmash on Thursday February 09, 2023 @10:20AM from the how-about-that dept.*
> *Matthew Hillier can't get Comcast service at his home in Arvada, Colorado. But that didn't stop Comcast from claiming it serves his house when it submitted data for the Federal Communications Commission's new broadband map. From a report: Comcast eventually admitted to the FCC that it doesn't serve the address -- but only after Ars got involved. Comcast will have to correct its submission for Hillier's house, and a bigger correction might be needed* ***because it appears Comcast doesn't serve dozens of other nearby homes that it claimed as part of its coverage area.***
> *When Hillier looked up his address on the FCC map, it showed Comcast claims to offer 1.2Gbps download and 35Mbps upload speeds at the house. In reality, he makes do with CenturyLink Internet that tops out at 60Mbps downloads and 5Mbps uploads. Hillier -- an engineer with 30 years' experience who previously worked for several telecom firms, including Comcast and Charter -- submitted a challenge to the FCC in mid-November, telling the commission that Comcast doesn't serve his address. Correcting false data is important because the map will be used to determine which parts of the US are eligible for $42.45 billion in federal grants to expand broadband availability. Program rules require ISPs to respond to challenges within 60 days, and Comcast's first response to Hillier's insisted that it actually does serve the house, which is on a street called Quartz Loop. "The provider subject to your challenge has disputed your challenge," the FCC told Hillier in an automated email on January 21. Comcast admitted to the FCC that it doesn't offer service at Hillier's home in Arvada on February 3, one day after Ars contacted Comcast's public relations department.*

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Wednesday, February 15, 2023 1:41 PM
To: 'Reporter' <reporter@jrn.com>
Subject: ISPs Shouldn't Get To Choose Regulators

Biden FCC Nominee Slams Critics, Says ISPs Shouldn't Get To Choose Regulators (arstechnica.com) 61

Posted by msmash on Tuesday February 14, 2023 @01:00PM from the closer-look dept.
President Biden's long-stalled nominee to the Federal Communications Commission fired back at her critics today, saying that the telecom industry shouldn't be allowed to choose its own regulators. From a report: "I believe deeply that regulated entities should not choose their regulator," Sohn said in prepared testimony for a Senate Commerce Committee nomination hearing today. "Unfortunately, that is the exact intent of the past 15 months of false and misleading attacks on my record and my character. My industry opponents have hidden behind dark money groups and surrogates because they fear a pragmatic, pro-competition, pro-consumer policymaker who will support policies that will bring more, faster, and lower-priced broadband and new voices to your constituents."
Biden first nominated Sohn, a longtime consumer advocate and former FCC official, on October 26, 2021. The full Senate never voted on whether to confirm Sohn as an FCC commissioner, and Biden renominated her last month. With the FCC deadlocked at two Democrats and two Republicans, Chairwoman Jessica Rosenworcel hasn't been able to pursue any major regulation of an industry that was deregulated during the Trump era. "The FCC has been without a majority for the entirety of the Biden administration -- over two years -- at a time when closing the digital divide is front and center," Sohn's testimony said. "There are too many important issues in front of the commission to lack a full complement of members, including improving the broadband maps, fixing the Universal Service Fund, closing the homework gap, ensuring fair access to broadband, and protecting consumers' privacy. Americans deserve a full FCC where I could play a critical role in addressing every one of these, but time is of the essence."

• Charter Takes Home Almost Half of $60M in Florida Broadband Funding Awards [telecompetitor.com]
Community-Owned Broadband Network Again Tops List Of Most Popular ISPs [techdirt.com]

From: Lefty Insider <lefty@tcw.org>
Sent: Monday, June 26, 2023 2:24 PM
To: 'Reporter' <reporter@jrn.com>
Subject: https://www.htrnews.com/story/news/politics/2023/06/26/wisconsin-to-receive-1-billion-in-federal-funds-to-expand-broadband/70357219007
Reporter,
This is pathetic. Too late and too little.
Testing will determine what service is actually being provided.
Lefty

According to the state Public Service Commission, the money will support efforts to bring internet service with download speeds of at least 100 Mbps and upload speeds of at least 20 Mbps (known as "100/20" service) to households and businesses considered to be "unserved" (lacking 23/5 service or entirely lacking service) and "underserved" (lacking 100/20 service), with unserved communities as the priority.

https://www.htrnews.com/story/news/politics/2023/06/26/wisconsin-to-receive-1-billion-in-federal-funds-to-expand-broadband/70357219007/

From: Reporter [mailto: reporter@jrn.com]
Sent: Monday, June 26, 2023 2:28 PM
To: Lefty Insider <lefty@tcw.org>
Subject: RE: https://www.htrnews.com/story/news/politics/2023/06/26/wisconsin-to-receive-1-billion-in-federal-funds-to-expand-broadband/70357219007

Hi Lefty,
I'm sorry I missed some of your earlier emails, but I'm not writing about broadband right now.
I hope to resume coverage later this year.
All the best,
Reporter
Business Reporter
Milwaukee Journal Sentinel

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Thursday, July 13, 2023 10:33 AM
To: 'Reporter' <reporter@jrn.com>
Subject: It's not getting better

US Ranks 32nd Worldwide On Broadband Affordability, Study Finds (techdirt.com) 46
Posted by BeauHD on Wednesday July 12, 2023 @06:00PM from the nothing-to-brag-about dept.
An anonymous reader quotes a report from Techdirt: *One recent study found that the U.S. was currently ranked somewhere around 32nd globally, behind countries like Russia, Lithuania, and Bulgaria [on broadband affordability] (you can find the full breakdown here): "The United States and Canada both have one of the highest internet costs," Alex Tofts, the Broadband Expert for Broadband Genie, said in a summary. "**It's driven by a lack of competition and bigger distances to connect, with lower population density than other developed countries.** However, both have average wages in the top fifteen in the world, compensating for the high cost of internet."*
*For decades, people (mostly the industry) tried to suggest the problem was because America was just so gosh darn big. But you'll notice that China and Russia, (ranked 25th and 17th, respectively) still perform better. Data routinely shows that affordability is the key obstacle to access, yet it's only been in the last few years that you've started to see this reality reflected in U.S. policymaking. [...] But again, the cause of this problem is very clear: monopolization and consolidation, protected by corruption. Few U.S. markets have the choice of more than one broadband provider at next-generation speeds. **And that's because federal and state lawmakers are so comically corrupt, they routinely let AT&T, Comcast, Charter, or Verizon lobbyists endlessly merge, crush all competition, then literally write state or federal legislation and policy over several decades.***
But it's not all doom and gloom. Decades of federal policy corruption and dysfunction have created an extremely strong, local, bipartisan grassroots movement for better broadband access. In countless towns and cities, municipalities, cooperatives, city-owned utilities, and creative new partnerships are building new, open access fiber networks with an eye on competition and cost. [...] Still, it's comical and grotesque that it's 2023 and a country that fancies itself a technology giant still can't meaningfully tackle equitable broadband access and affordability. And that telecom and media policy has basically become a boring afterthought in the era of "Big Tech." Ensuring equitable access to an essential utility is just too boring for most 2023 policy circles, much less the modern attention economy.

Broadband Conversations with a Politician

Rep. Tittle,
This message serves to inform you that what you relayed to me over the phone is clearly not supported by any facts that I could discover.
You (state gov.) have had, and continue to have many opportunities to structure and place conditions on this corporate welfare (resident tax monies) doled out to the telecoms.
Given Wisconsin's 38th out of 50 ranking, your legislature has clearly not been effective with Broadband implementation/regulation over many, many, years.

The Wisconsin Assembly has recently passed a bill to expand funding for rural broadband Internet through the Broadband Expansion Grant Program. Rep. Mark Spreitzer, D-Beloit, was a committee member and an author of the bill. The grant program currently allocates **$1.5 million a year to expand rural broadband access, with an additional $4.5 million per year being proposed for future funding**.
govtech.com
https://www.govtech.com/network/wisconsin-passes-bill-to-expand-funding-for-rural-broadband.html

The Public Service Commission of Wisconsin (PSC) and Wisconsin Broadband Office award grants to encourage the deployment of broadband and improve access for Wisconsin residents in underserved areas of the state. To be eligible, applicants must demonstrate how the proposed project will affect access to healthcare services and educational opportunities.[2] Governor Tony Evers and Rebecca Cameron Valcq, Chairperson of the PSC, recently announced key application dates for the next round of grants available.
psc.wi.gov, weau.com, ruralhealthinfo.org

But Wisconsin's broadband infrastructure also consistently ranks near the bottom of states in the nation. Wisconsin currently ranks 38th for Internet access, out of all 50 states.
https://www.wpr.org/demand-broadband-internet-remains-high-rural-wisconsin

The Broadband Gap Leaves Rural Wisconsin Behind In The COVID-19 Crisis
Virtual Schooling, Telemedicine And Remote Work During The Pandemic Are Even More Difficult In Communities Without High-Speed Internet
https://www.wiscontext.org/broadband-gap-leaves-rural-wisconsin-behind-covid-19-crisis

With poor data, deficient requirements and little oversight, massive public spending still hasn't solved the rural Internet access problem
https://www.jsonline.com/in-depth/news/2021/07/14/weve-spent-billions-provide-broadband-rural-areas-what-failed-wisconsin/7145014002/

Broadband expansion grants approved for rural Wisconsin
https://www.dailycardinal.com/article/2018/04/broadband-expansion-grants-approved-for-rural-wisconsin

Wisconsin Internet Coverage & Availability in 2023
https://broadbandnow.com/Wisconsin

The Ongoing Pursuit Of Better Broadband Access In Rural Wisconsin
https://www.wiscontext.org/ongoing-pursuit-better-broadband-access-rural-wisconsin

Governor Evers, PSC announce dates for 2021 Broadband Expansion Grant round
https://www.weau.com/content/news/Governor-Evers-PSC-announce-dates-for-2021-Broadband-Expansion-Grant-round-571101961.html

Perhaps you can put hands on keyboard for your reply so that we do not again get *lost in translation* with your dictation to staff. At the very least my expectation would be that you would have your staff brief you on the particulars here.
Lefty

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Wednesday, April 05, 2023 4:35 PM
To: 'Barbiyeru, Sulamita' <Sulamita.Barbiyeru@legis.wisconsin.gov>
Subject: RE: Charter/Spectrum Internet complaint

Sulamita,
It is an easy mistake to make if English is not your first language.
I assumed, incorrectly, that he was typing that response.
No worries,
Lefty

From: Barbiyeru, Sulamita [mailto: Sulamita.Barbiyeru@legis.wisconsin.gov]
Sent: Wednesday, April 05, 2023 3:27 PM
To: Lefty Insider <lefty@tcw.org>
Subject: RE: Charter/Spectrum Internet complaint

Lefty,
I am sorry for the typo. I did not state Rep. Tittle's response properly. The sentiment was that you were having trouble with DATCP, not that you were in trouble with DATCP. I pray that the FCC and DATCP helps you resolve everything accordingly and that you are made whole from all your challenges with Spectrum.
Please keep the Rep. Tittl office updated on everything. Again, I apologize for the typo.
Sincerely,
Sulamita

Sulamita Barbiyeru
Office of Representative Rep. Tittl
25th Assembly District
State of Wisconsin
608-266-0315

From: Lefty Insider <lefty@tcw.org>
Sent: Tuesday, April 4, 2023 2:19 PM
To: Rep.Tittl <Rep.Tittl@legis.wisconsin.gov>
Subject: RE: Charter/Spectrum Internet complaint

Hello Rep. Paul,
Yes, I have been battling Spectrum for some two years now, trying to achieve their advertised Internet service without much success.
2021 upgraded from 200 to 300Mbps but did not get it.
2023 they told me I was upgraded to 500Mbps but did not actually get it.
2023 I upgraded to 1000Mbps and am not getting it consistently
That is it in a nutshell.
"It seems you're in trouble with DATCP"
I do not know what you mean by this.
Please clarify.
DATCP has been as feckless at the FCC in terms of resolving this issue.
Anything you can do to assist will be appreciated,
Lefty

From: Rep.Tittl [mailto: Rep.Tittl@legis.wisconsin.gov]
Sent: Tuesday, April 04, 2023 2:07 PM
To: Lefty Insider <lefty@tcw.org>
Subject: RE: Charter/Spectrum Internet complaint

Lefty,
I've seen what you've sent me and the complaint you have filed with FCC. It seems you're in trouble with DATCP. If there's anything you need from me, we'd be glad to help out.
God Bless,
Paul

Paul R. Tittl
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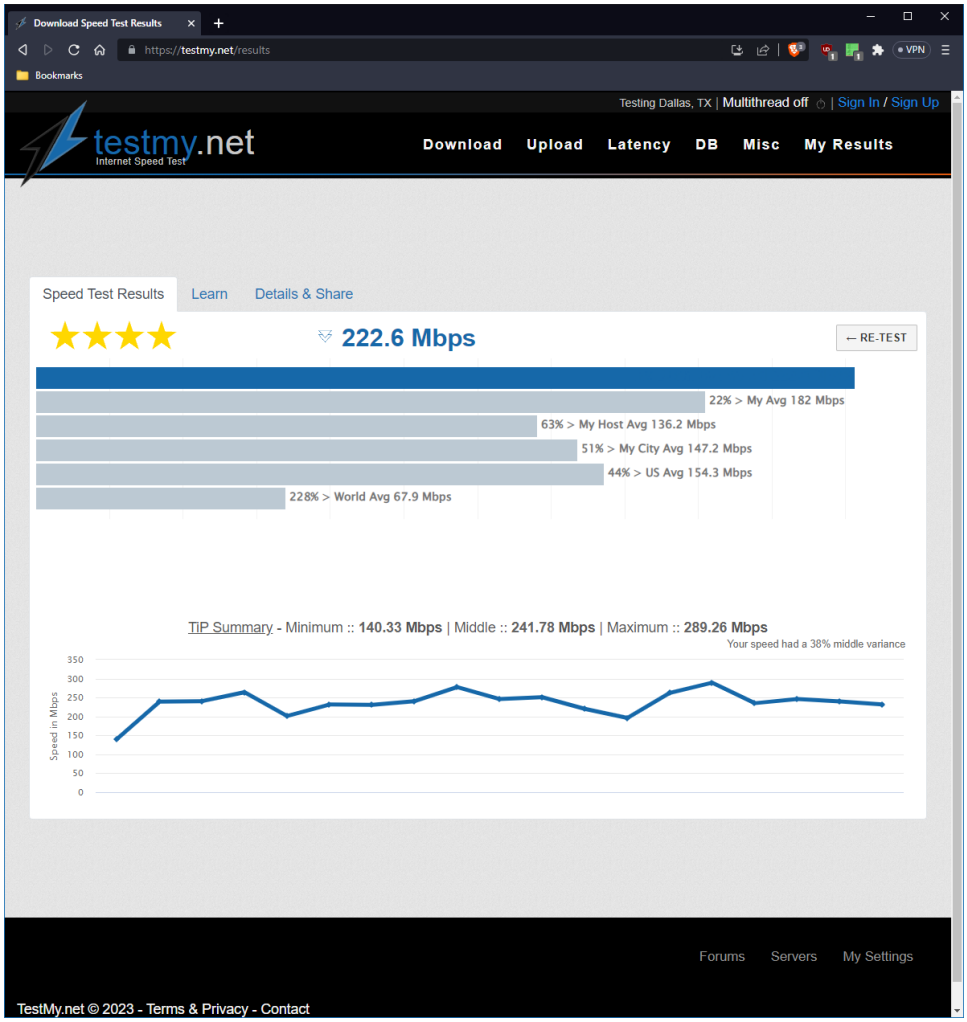
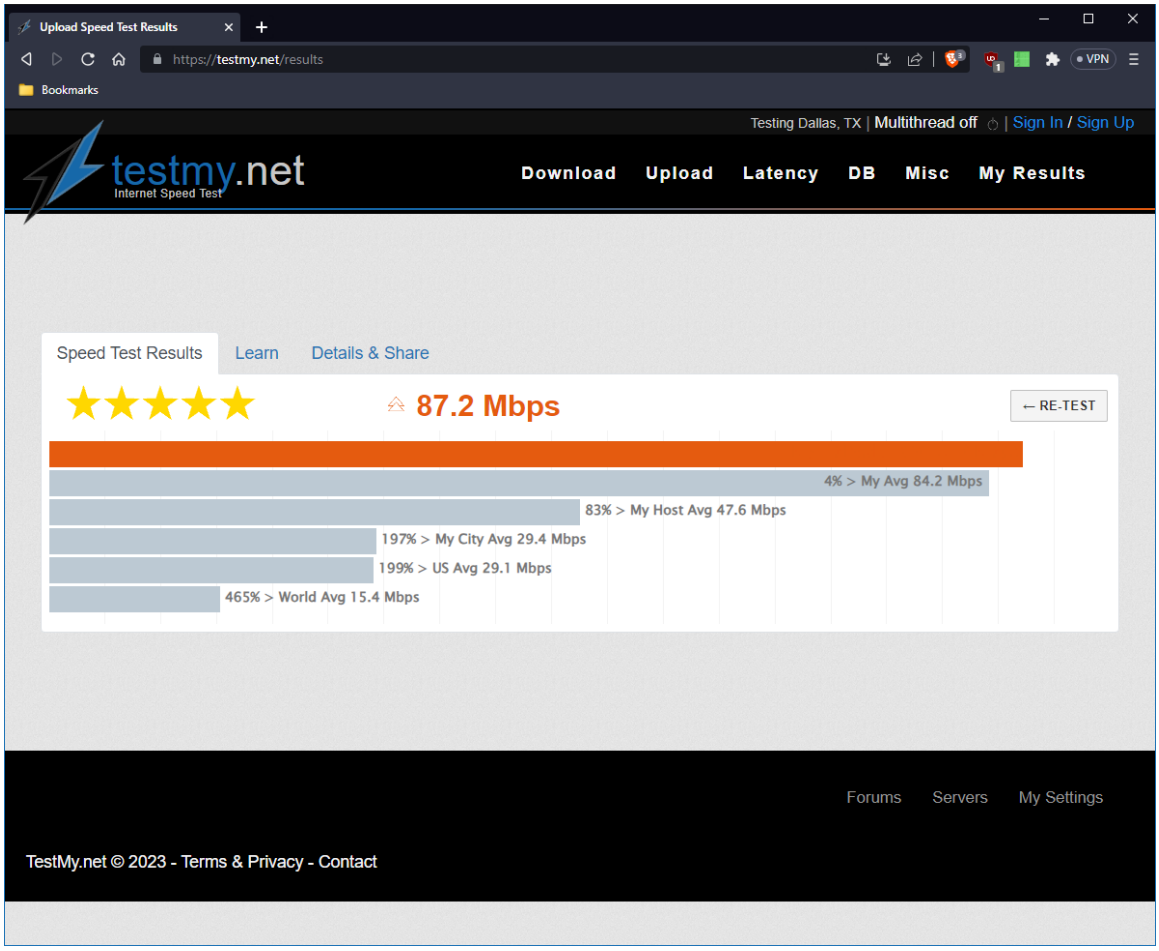
Conversations With A Fellow Computer Geek

From: Cool Hand Luke [mailto: Cool Hand@ProDigitalSoftware.com]
Sent: Saturday, June 24, 2023 2:38 PM
To: 'Lefty Insider' <lefty@tcw.org>
Subject: RE: Pay for only what you get?

I guess testmy.net is more or less accurate…



I pay for fiber optic service from Hotwire Communications. Our home internet and TV service is partly funded through our homeowners' association dues, but also augmented by $20 a month by me for a speed upgrade to 250/25 megabits. I can't honestly say what we pay in total, but it's not cheap I imagine. Specifically, my plan provides 250 megabit downlink service, and testmy.net seems to concur:



Uplink should be 100 megabits... My son was playing an online game and my wife was streaming 4K TV from YouTube all during these tests.

There's a story behind this… At one point I had 50 mb down, 50 mb up with Hotwire communications. Then they "upgraded service" in the neighborhood. That took it to 100 mb down, 10 mb up. Thing is, I had actually been paying extra for the extra uplink bandwidth AND a fixed IP address. They just changed it without any notice, so I raised hell and escalated to a VP. She "gave in" an granted me a fixed IP address and 100 / 10 for no extra cost. But I would have to pay $20 extra per month for a whole 25 mb up, at which point I'd also get 250 mb down. I took the deal. The infrastructure could clearly handle more uplink speed but they simply won't grant it. I got the short end of that deal and there was nothing I could do about it. At least the service has been reliable.

I believe I'm getting the advertised speeds. I haven't reached back out to Hotwire to see if they might have a more symmetric speed, though honestly my 25 megabit uplink speed hardly ever limits what I can do.

One interesting thing… When I'm on the VPN to get into AdobeNet, my throughput FROM Adobe goes down to roughly half of what my link can support. I suspect either one of two things is happening: Either Adobe is limiting my speed at their end (unlikely as at least some other folks report getting full speed), ***or my ISP does not recognize the (encrypted) traffic and has decided to cut the speed of it down, since it's not part of the group of companies paying them a premium to provide the maximum bandwidth. That's a thing now.***

From: Cool Hand Luke [mailto: Cool Hand@ProDigitalSoftware.com]
Sent: Saturday, June 24, 2023 2:27 PM
To: 'Lefty Insider' <lefty@tcw.org>
Subject: RE: Pay for only what you get?

Good luck with that. Their position is almost certainly "Fine, go buy service from someone else. We all have you by the balls."

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Saturday, June 24, 2023 2:41 PM
To: Cool Hand@ProDigitalSoftware.com
Subject: RE: Pay for only what you get?

Cool Hand,
Am applying pressure of the regulatory agencies, corporate management, news media, and politicians.
I believe that their monopoly status incurs some practical responsibilities that can be made to come to bear here.
Eternal optimist,
Lefty

PS. Windows 10 and especially Windows 11 equal the unacceptable functional degradation of my computer tools. Or as Cory Doctorow put it, the enshitification of modern software.

Look familiar?

Even an AI gets it. <grin>

What is the enshitification of software?

ChatGPT 3.5

The term "enshitification of software" is not a widely recognized or established term within the field of software engineering or computer science. It does not have a standard definition or widely accepted meaning.

However, based on the combination of the words "shit" and "software," one could interpret it as a derogatory expression used to criticize or express dissatisfaction with the quality, functionality, or performance of a particular software product or system. It may imply that the software has been poorly designed, implemented, or maintained, resulting in a negative user experience or subpar performance.

It's important to note that this term is not a technical or professional term commonly used in the industry, and it might be considered informal or colloquial. When discussing software quality or expressing concerns about specific software products, it is generally more effective to use more precise and objective language to describe the issues or limitations observed.

From: Cool Hand Luke [mailto: Cool Hand@ProDigitalSoftware.com]
Sent: Sunday, June 25, 2023 3:14 PM
To: 'Lefty Insider' <lefty@tcw.org>
Subject: RE: Pay for only what you get?

Bravo for your optimism.

You copied everyone of any import. I'd bet a doughnut that not one of them will read your message.

Not that they shouldn't read it, and not that it doesn't contain all the information they need. They absolutely should act. But all those folks are going to be thinking they have big policy issues to deal with, one lowly user can't possibly matter. This is politics in the 2000s.

Please let me know if you hear anything back. I'm genuinely interested. You really SHOULD be getting the speed you're paying for.

P.S., I suggest a written letter might net a more formal response.

Cool Hand

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Sunday, June 25, 2023 11:49 PM
To: 'Cool Hand@ProDigitalSoftware.com' <Cool Hand@ProDigitalSoftware.com>
Subject: RE: Pay for only what you get?
Cool Hand,
Here is some of the bcc list that you did not see:
bsams@stardock.com'; 'taibbi@substack.com'; 'mat-wg@ripe.net'; 'ripe-atlas@ripe.net'; 'community@samknows.com'; 'janelle.robins@eff.org'; 'info@eff.org'; 'effcooperatingtechs@eff.org'

Being the clever lad I am, I just discovered that the author of the spreadsheet Spectrum sent was foolish enough to have his name in his Excel registration, shows up on Properties, Details, so knowing Charter's email format I included him on the email list for the next one. <g>

Btw, I always remove metadata from photos before sending. I metadata on my MS Office files shows "A.User"! A tribute for former days of corporate battle or perhaps yet again a _tilting at windmills_.

On a previous email they sent this Excel data from their testing:
t1.st.chi10.tbone.rr.com Mean Average 931 /38.9 Mbps
n1-fcc-chicago-us.samknows.com Mean Average 919/ 38.8 Mbps

*The above and an attached spreadsheet was all can get out of them to this point, when I told them of my poor performance at **seven** websites, and they like to talk like this:*

"At some point we will need to agree to disagree that we have an obligation to ensure internet speed performance across the entirety of the world wide web. That being said, we are testing both on Spectrum network and off spectrum network as part of the SamKnows testing we are performing. "

"We are following the SamKnows protocols to test the network we are responsible for operating which is consistent with the approach the FCC takes in testing ISP network performance."

So they invented this term called _off-net_ to try to defer responsibility for anything outside the Charter network SPECTRUMNET.

Complaints made to the FCC and WI DATCP require a written response from Charter i.e. lawyer letter. They sent me a few in the past blowing me off, but I am now forcing them to show their homework and so far they are cheating on it. They are tardy on the latest 30 day time limit on the letter as the complaint is ongoing. I do have the ear of a sympathetic bureaucrat at the WI DATCP. This will need to attract the attention of the WI AG for anything to really happen.

I would be interested in your test results at fast.com (Netflix) and fiber.google.com/speedtest (Amazon Prime). I do not see more than 300Mbps at either, and these sites are cached on Akamai or Cloudflare CDN servers. Do a tracert to see for yourself.

PS. did you like my Hunter S. Thompson misquote? ;-)

I will bcc you on further communications, and thanks for the support,

Lefty

From: Cool Hand Luke [mailto: Cool Hand@ProDigitalSoftware.com]
Sent: Sunday, June 25, 2023 3:18 PM
To: 'Lefty Insider' <lefty@tcw.org>
Subject: RE: Pay for only what you get?

Hi Lefty,

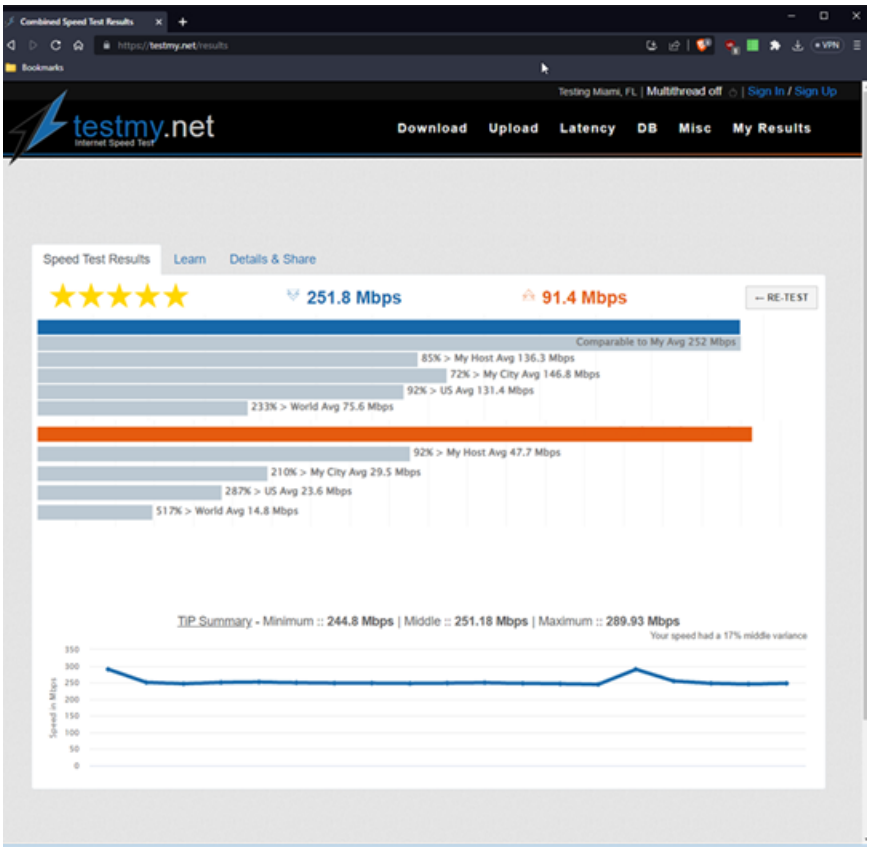
Miami server (see below)…

What's exciting is that occasionally I get a bump in download speed that's faster that what I'm advertised by Hotwire Communications.

What's also interesting is that the plan I originally signed up for was for 250 Mbit down, 25 Mbit up. They unilaterally increased my uplink speed, for no extra charge, to 100 Mbit. I feel privileged to have this service.

I wish you had similar luck with your service.

-Cool Hand Luke



From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Sunday, June 25, 2023 11:57 PM
To: 'Cool Hand@ProDigitalSoftware.com' <Cool Hand@ProDigitalSoftware.com>
Subject: RE: Pay for only what you get?

Cool Hand,

Don't be counting your chickens just yet.

This to me from the Admin at testmy.net

> *"You only have a few tests. Run some more tests with multithread disabled on the Colorado mirror and also test against New York and Dallas. Run a few tests against each, multithread off and on. I need more data to make a proper assessment. We can help get you up to speed.*
> *Having these extra results from different mirrors will help us better understand what is going on.*

Bottom line: You shouldn't have single thread running 8-10x slower than multithread, or it means network congestion. https://testmy.net/ipb/

Lefty

From: Lefty Insider <lefty@tcw.org>
Sent: Sat, June 24, 2023 3:47 PM
To: Cool Hand@ProDigitalSoftware.com
Subject: RE: Pay for only what you get?

Cool Hand,

If you go into the settings you can pick your server(s), so perhaps Miami rather than Dallas.

If you turn on Multithread, you can test to multiple servers which is the most accurate.

If you set it up to automate testing for a period of time, like every hour from 1 to 6 am, it can be even more accurate.

Lefty

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Monday, June 26, 2023 12:27 AM
To: 'Cool Hand@ProDigitalSoftware.com'
Subject: RE: Pay for only what you get?

Cool Hand,

After further thought, I decided to give you the back story here, although it will be in my next novel.

In 2021, amidst the pandemic, I was using a VPN and Tor to do my Dark Web research for my third and fourth books. I was also experimenting with using a VM, all of which create slowness.

100 Mbps was not cutting it, I was also using wireless at this point so I had that inconsistent degradation despite upgrading my router to Wi-Fi 6 and network cards to wireless 802.11 ac/ax.

So I upgraded to their 300Mbps service and saw no improvement. So I started testing and emailing results, writing and producing a song rhyming Spectrum with Rectum, and after several months of insisting that I was the problem, they (a VP) reduced my price. To me this was an admission of guilt.

Meanwhile they say they bumped my service to 400Mbps. I believe this is a marketing technique to justify steady price increases and ward away potential competition in the area.

Then in 2023 they sent me a notice that I have a free upgrade to 500Mbps, them apparently not knowing about the whole letting sleeping dogs lie thing.

So I started testing again, only now with Cat6/7 wired Ethernet, and could only get that speed inside of 200 miles within their SPECTRUMNET. More like 90Mbps with FTP even then.

I suspected that they could not actually deliver a 1000Mbps service to my rural area, wanted to prove it, so I upgraded to that and again could only get that speed inside of 200 miles within their SPECTRUMNET.

I do not really need 1000, 500 would be fine if I could actually get it.

Yet because of this corporate monopoly, if I downgrade to 500 I will still pay the same $100 per month. So I am stuck in some Charter Marketing Catch-22 bullshit here.

Hence the pissed off nature of my correspondence, and my continuing persistent and relentless battle,

Lefty

From: 'Cool Hand@ProDigitalSoftware.com'
Sent: Tuesday, July 04, 2023 4:35 PM
To: Lefty Insider [mailto: lefty@tcw.org]
Subject: RE: Connection woes
https://internetspeedtestx.com/ seems to accurately show me my advertised speeds.
Cool Hand

From: 'Cool Hand@ProDigitalSoftware.com'
Sent: Saturday, July 08, 2023 10:48 AM
To: Lefty Insider [mailto: lefty@tcw.org]
Subject: RE: Comprehensive comparison testing (with a distinctive and definitive cherry on top)

Hi Lefty,

I'd say it wouldn't hurt to summarize the status of the data you gathered so far, in as few words as possible. No one could possibly be tracking the ongoing status of this data in any detail.

Cool Hand

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Saturday, July 08, 2023 11:16 AM
To: 'Cool Hand@ProDigitalSoftware.com'
Subject: RE: Comprehensive comparison testing (with a distinctive and definitive cherry on top)

Cool Hand,

I have done that in the past, perhaps it is time to do it again.

The "Pay for only what you get" email was a rather lengthy attempt at a summary.

Thanks,

Lefty

From: Cool Hand[coolhand@ProDigitalSoftware.com]
Sent: Sunday, July 16, 2023 8:07 AM
To: 'Lefty Insider' <lefty@tcw.org>
Subject: RE: Executive Summary of Charter/Spectrum Internet Speed Testing from March 2020-July 2023

Your summary went pretty long. But this at least got your message across.

Out of curiosity what is your current plan (and what is the highest plan you have agreed to pay for), and how much do you pay now? I'm just wondering whether, after all the upgrades, they have come close to making good on delivering what your original agreement with them called for.

" So I upgraded to their 300Mbps service"

Are you still paying that rate?

From one of your graphics I see: Median 436 down, 32 up. How much uplink speed was promised by that 300 Mbps service?

Cool Hand

From: Lefty Insider <lefty@tcw.org>
Sent: Sun, July 16, 2023 9:37 AM
To: Coolhand@ProDigitalSoftware.com
Subject: RE: Executive Summary of Charter/Spectrum Internet Speed Testing from March 2020-July 2023

My last upgrade was to 1000/40 that is now at $100 per month. At least $25 too much, based on other ISP's.

Because of a marketing Catch-22 if I now downgrade back to 500, I will still pay the same.

If I go back to 300 for $69.99 I will also be back to seeing 200 speeds.

I was originally at 200/10, upgraded to 300/20,with no effect, meanwhile they pushed this to 400 and now 500 for no additional cost. To me this speed uptick is for market purposes only and perhaps to scare off any potential competition. I was paying around $69.99 until the latest upgrade.

I have never been able to achieve their advertised except sometimes to their rigged local speedtest.net sites.

Here is some work I just did on routing: Two Rivers is my closest Spectrum router

Notice how the routing goes nuts when I get off of SPECTRUMNET and on to the real INTERNET.

A traceroute to your Spectrum customer 24.240.62.10 in Sturgeon Bay, WI shows:

```
Tracing route to 024-240-062-010.res.spectrum.com [24.240.62.10]
over a maximum of 30 hops:
  1    3 ms     3 ms     2 ms  192.168.1.1
  2    *        *        *     Request timed out.
  3   12 ms    11 ms    10 ms  lag-63-10.dtr01twrvwi.netops.charter.com [96.34.23.212]
  4   12 ms    13 ms    12 ms  lag-203.dtr02jcptwi.netops.charter.com [96.34.22.185]
  5    *        *        *     Request timed out.
  6   25 ms    22 ms    23 ms  024-240-062-010.res.spectrum.com [24.240.62.10]
```

Trace complete.6 hops from me to them, but it basically jumps from the Two Rivers router 96.34.23.212 to the Sturgeon Bay router 96.34.22.185 to your residential customer router.

1. A traceroute to your residential customer 24.240.62.10 in New Holstein, WI, 24.240.122.49 shows the same path:
2. A traceroute to your business customer 24.240.120.210 in Rhinelander, WI, 24.240.122.49 shows eight hops via Two Rivers, Stevens Point and Naperville, Il to the customer:
3. A traceroute to your residential customer 24.240.94.0-255 down south in Janesville, WI shows seven hops via Two Rivers, Madison, and then to Janesville and the customer.

Traceroutes to other servers:

1. A traceroute to Tcw.org shows 12 hops, Two Rivers to Stevens Point to Fond du Lac to Milwaukee to Naperville, Il, to Franklin, WI
2. A traceroute to ftp.tcw.org shows the same path
3. A traceroute to mail.tcw.org shows the same path
4. A traceroute to Netflix.com shows 30 hops, Two Rivers to Stevens Point, to Eau Claire, to Minneapolis, to (MAE-EAST) Ashburn, VA. to (Amazon), Seattle, WA to six timeouts and to 52.93.28.190 (Amazon), Seattle, WA (timeouts on the last 12 hops) **This all seems quite odd to me.**
5. A traceroute to Amazon.com shows 25 hops, Two Rivers to Stevens Point, to Eau Claire to Minneapolis, to (MAE-EAST) Ashburn, VA. to (Amazon), Seattle, WA, back to (MAE-EAST) Ashburn, VA. to (Amazon), Seattle, WA, then eleven timeouts and then to Amazon at Ashburn, VA 52.94.236.248. **This all seems quite odd to me as well.**
6. A traceroute to Hulu.com shows 18 hops, Two Rivers to Madison, to Rochester, MN to Owatonna, MN to Grand Island, NE to Chicago, IL, and back to Grand Island, NE to Atlanta, GA to Portland, OR and finally to Akamai Seattle, WA. This seems like schizophrenic routing. Ping Pong anyone?
7. A traceroute to twit.tv shows 19 hops, Two Rivers to Stevens Point, to Eau Claire, to Chicago, IL, to Ashburn, VA to (Amazon) Dulles, VA (cloudfront.net)

Note: There does not seem to be any Akamai or Cloudflare CDN servers in these paths to streaming content except for Hulu.com.

From: Cool Hand[coolhand@ProDigitalSoftware.com]
Sent: Sunday, July 16, 2023 9:34 AM
To: 'Lefty Insider' <lefty@tcw.org>
Subject: RE: Executive Summary of Charter/Spectrum Internet Speed Testing from March 2020-July 2023

> *I have never been able to achieve their advertised except **sometimes** to their rigged local speedtest.net sites.*

I think your "rigged" assessment - saying that the speed test sites are essentially reporting unreal numbers inside the Spectrum network - is essentially correct.

That being said, I usually DO see my full tested speeds also from various actual sites. When I download things I generally get the full 250 Mbits I pay for. When I download things I see the data rate in the old Task Manager jump up to 25% of my 1 gigabit Ethernet.

I suspect that if you got as good service quality as I do you wouldn't feel you need more than 250 MBits. Not trying to brag or make you feel bad, but affirming that you don't have false expectations. It CAN be better. It SHOULD work for you. It must just be that the Spectrum infrastructure isn't up to the task of actually delivering that service to you from actual online providers reliably, though parts of it (e.g., between you and speed test servers) can run fast.

FWIW, here at my home we have a reasonably high demand for internet bandwidth here in our household… For example, we have a 4K TV that's on and streaming high res content most of the day, most days. My wife thinks nothing of turning it on a YouTube channel that shows sweeping views of Norway or Switzerland and plays music. It virtually never buffers or shows lost frames. Of course I use VPN while at work, through which I transfer quite a few large builds, big test files, etc. My son also uses our network for gaming and streaming (he's home all day in the summer, as he's a teacher). I always hear him streaming videos to his iPad, Macbook, HD TV, phone (sometimes more than one at once - I may never understand modern youth [he's 31])… He leaves his HD TV streaming YouTube quite often to provide his two chinchillas something to watch, presumably to enrich their days. Yet we really never perceive videos or streaming content as broken or unreliable.

I'm a bit surprised that you were willing to pay for an "upgrade" to 1000/40 once they had given you their lesser higher speed upgrades for free. I presume you did so because you STILL couldn't reliably see what you wanted to watch or download what you wanted to download.

I'm thinking there's a reliability aspect that's somewhat separate from speed, and yours may not be primarily a speed issue.

Meanwhile I'm thanking my stars that Hotwire Communications are doing as well as they are for us here.

Cool Hand

From: 'Lefty Insider' <lefty@tcw.org>
Sent: Sunday, July 16, 2023 11:20 AM
To: 'coolhand@ProDigitalSoftware.com'
Subject: RE: Executive Summary of Charter/Spectrum Internet Speed Testing from March 2020-July 2023

"I think your "rigged" assessment - saying that the speed test sites are essentially reporting unreal numbers inside the Spectrum network - is essentially correct."

According to the Ookla Wiki, the fastest 10% and slowest 30% of your results are DISCARDED with speedtest.net. The remaining data is averaged together to determine the final result.
Ookla speed tests are also multithreaded, meaning that they open more than one connection to the host and combine the speeds, as do web browsers.
This often can mask congestion issues, making your connection look better than it really is.

"That being said, I usually DO see my full tested speeds also from various actual sites. "

I don't think you really know that unless you run the linear auto tests to testmy.net for ten days like I outlined in a previous email.
Some people don't really want to know.

"I'm a bit surprised that you were willing to pay for an "upgrade" to 1000/40 once they had given you their lesser higher speed upgrades for free."

At that point, I was trying to prove a point that if they can't deliver 500, then they certainly couldn't deliver 1000.
I half expected this upgrade to blow up there system, but I was wrong about that.
But I did get a modem with a 2.5 Gbps Ethernet port out of the deal, and I do now almost have 500.
This isn't just a battle for me, or the 2500 plus Spectrum customers in NE Wisconsin. It is a battle for rural America. See below if you want to read about this sad but true story.
Sorry for the length, to quote Mark Twain/Ben Franklin, I didn't have time to make it shorter,
Lefty

Excerpted from my new book:

The median download speeds across Wisconsin are considerably below the current minimal acceptable level of 100/25 Mbps, and should be closer to ten times that, or 1Gbps. And yet, the higher Internet speeds advertised by the monopoly broadband provider incumbents are just an illusion. They are repeatedly caught lying about speed, coverage and pricing and are punished with small inconsequential fines. Annually, the Internet provider companies file Federal broadband reports lying about coverage areas and speed delivered which no one in or out of government believe.

From this writers own personal experience, I know that advertised Internet speeds represent a massive fraud being perpetrated on the American public, who mostly do not know when asked what speed they are paying for, or even to whom they are paying it.

The FCC, FTC, CPA, and Wisconsin DATCP (consumer protection) are aware of this but have become feckless agencies, beholden to the lobbyists and are thus not interested in resolving it.

Our current national telecommunication system, much like our national healthcare system, does not serve anyone well, completely fails many, while having the highest cost and poorest outcomes in the developed world.

As with most problems we face the root cause is greed and corruption, which eventually may very well be the primary cause of the end of us as a democracy, a nation, as a civilization, and perhaps as a species. Laws are the operating system of a democracy, and the failure of our legal system will likely cause it to crash. A Real Life BSOD. It gets real medieval and animalistic from there, see the Jan. 6 insurrection.

Wisconsin Internet Coverage & Availability in 2023
https://broadbandnow.com/Wisconsin

The Real Digital Divide? Advertised Vs. Actual Internet Speeds

Our data shows that 15% of Internet users in the U.S. — nearly 45 million people — are not getting the speeds they're paying for. On average, Americans are getting 79% of the speed they pay for. Cable and fiber are by far the most common home Internet connections in the U.S., but they are also the most likely to under-deliver Key findings
Fiber and cable internet have the biggest gap between advertised and actual speeds – with most people getting, on average, ***about a third of the speeds they pay for***
Allconnect's internal data shows that cable and fiber Internet providers advertise faster speeds than they actually deliver, while the FCC's report (self-reported) shows the opposite.

https://www.allconnect.com/blog/advertised-vs-actual-Internet-speeds

Report: Most Americans Have No Real Choice in Internet Providers
https://ilsr.org/report-most-americans-have-no-real-choice-in-internet-providers/

Why You Probably Aren't Getting the Internet Speeds You're Paying For (and How to Tell)
https://www.howtogeek.com/165321/why-you-probably-arent-getting-the-internet-speeds-youre-paying-for-and-how-to-tell/

Americans Hate ISPs Almost As Much As They Hate Gas Stations, Survey Finds

Posted by BeauHD on Monday June 26, 2023 @07:00PM from the you-don't-say dept.
An anonymous reader quotes a report from ExtremeTech: Americans hate their internet service providers (ISPs) more than any other segment of the consumer economy -- except gas stations. A fresh set of rankings from the American Consumer Satisfaction Index (ACSI) reveals that few consumers are happy with the way their ISPs conduct business, preferring them only over trips to the pump in a list of 43 major industries. The rankings come courtesy of the ACSI's most recent telecommunications study, which the organization publishes annually. The study covers subscription TV services, video streaming services, and ISPs of both the fiber and non-fiber variety. Using interviews with 22,061 American consumers conducted between April 2022 and March 2023, this year's telecommunications study investigates just how happy people are with their ISPs, then pits that data against that of several other industries. This year, ISPs ranked lower than the endlessly frustrating automobile, banking, and health insurance industries, as well as 39 others that people tend to have an easier time with, such as breweries and athletic shoes.
On a satisfaction scale of 1 to 100, ISPs earned a lackluster 68, which consists of fiber's 75-point and non-fiber's 66-point satisfaction scores combined. The ACSI used customers' input on a number of experiential data points, from choosing a plan to actually using their home Wi-Fi networks, to calculate both scores and combine them based on usage. Although fiber customers found their internet to be relatively reliable and their bills easy to understand, earning an 80 in both categories, non-fiber customers weren't as impressed at 72 and 75, respectively. Unsurprisingly, both fiber and non-fiber customers enjoyed reaching out to their providers' customer service teams the least out of 14 total data points.
There was only one industry that ranked lower than ISPs. As much as Americans generally dislike the way ISPs manage hardware, pricing, customer service, outages, and more, they dislike gas stations even more, giving the category a measly score of 65. While the ACSI doesn't share respondents' reasoning (it's a telecommunications study, after all), it's easy to see why consumers might not enjoy spending obscene money to fill their tanks at dusty roadside stops.

Community-Owned Broadband Network Again Tops List Of Most Popular ISPs [techdirt.com]

US Ranks 32nd Worldwide On Broadband Affordability, Study Finds (techdirt.com) 46

Posted by BeauHD on Wednesday July 12, 2023 @06:00PM from the nothing-to-brag-about dept.

An anonymous reader quotes a report from Techdirt: One recent study found that the U.S. was currently ranked somewhere around 32nd globally, behind countries like Russia, Lithuania, and Bulgaria [on broadband affordability] (you can find the full breakdown here): "The United States and Canada both have one of the highest internet costs," Alex Tofts, the Broadband Expert for Broadband Genie, said in a summary. "It's driven by a lack of competition and bigger distances to connect, with lower population density than other developed countries. However, both have average wages in the top fifteen in the world, compensating for the high cost of internet."

For decades, people (mostly the industry) tried to suggest the problem was because America was just so gosh darn big. But you'll notice that China and Russia, (ranked 25th and 17th, respectively) still perform better. Data routinely shows that affordability is the key obstacle to access, yet it's only been in the last few years that you've started to see this reality reflected in U.S. policymaking. [...] But again, the cause of this problem is very clear: monopolization and consolidation, protected by corruption. Few U.S. markets have the choice of more than one broadband provider at next-generation speeds. And that's because federal and state lawmakers are so comically corrupt, they routinely let AT&T, Comcast, Charter, or Verizon lobbyists endlessly merge, crush all competition, then literally write state or federal legislation and policy over several decades.

But it's not all doom and gloom. Decades of federal policy corruption and dysfunction have created an extremely strong, local, bipartisan grassroots movement for better broadband access. In countless towns and cities, municipalities, cooperatives, city-owned utilities, and creative new partnerships are building new, open access fiber networks with an eye on competition and cost. [...] Still, it's comical and grotesque that it's 2023 and a country that fancies itself a technology giant still can't meaningfully tackle equitable broadband access and affordability. And that telecom and media policy has basically become a boring afterthought in the era of "Big Tech." Ensuring equitable access to an essential utility is just too boring for most 2023 policy circles, much less the modern attention economy.

Comcast Complains To FCC That Listing All of Its Monthly Fees is Too Hard (arstechnica.com) 47
Posted by msmash on Wednesday June 14, 2023 @02:45PM from the how-about-that dept.
mschaffer shares a report*: Comcast and other ISPs have annoyed customers for many years by advertising low prices and then charging much bigger monthly bills by tacking on a variety of fees. While some of these fees are related to government-issued requirements and others are not, poorly trained customer service reps have been known to falsely tell customers that fees created by Comcast are mandated by the government. The FCC rules will force ISPs to accurately describe fees in labels given to customers, but Comcast said it wants the FCC to rescind a requirement related to "fees that ISPs may, but are not obligated to, pass through to customers." These include state Universal Service fees and other local fees. As Comcast makes clear, it isn't required to pass these costs on to customers in the form of separate fees. Comcast could stop charging the fees and raise its advertised prices by the corresponding amount to more accurately convey its actual prices to customers. Instead, Comcast wants the FCC to change the rule so that it can continue charging the fees without itemizing them..*
I suppose it's just easier to grab people's money than it is to make up names for the fees, Mschaffer adds.

From: 'Lefty Insider' <lefty@tcw.org>
Sent: Sun, July 16, 2023 1:20 PM
To: coolhand@ProDigitalSoftware.com
Subject: Background of a progressive

Cool Hand,

Some background might be helpful in understanding my current three year fight against Spectrum.

I am a disenchanted and disgusted veteran of the Army UN Peace Keeping force in S. Korea. A tricky _Dick_ Nixon Vietnam-era draftee, who saw 55,000 of his generation sacrificed for nothing.

I am a disappointed and discouraged veteran of the US Peace Corps in West Africa, where colonialization and racism continue to this day.

I am a discontented college graduate who had some unnecessary difficulty due to a substandard elementary parochial school and public school education.

I am a disgruntled and disillusioned former secondary and post-secondary public and private school teacher/professor, whose red pen edits were too hard on adult students but appreciated by the young.

I am an angry and frustrated survivor as an urban public school board member, who has seen the excesses of pubic unions and the limitations of self-governing systems.

I am a disconcerted yet wiser and no longer naive former cog in a corporate machine, that lies and cheats as standard business practice.

I am a unsatisfied veteran of an private school online Master's degree program of the early 2000's were the costs were high and product was marginal.

I am a frustrated veteran of online dating sites of the early 2000's, where liars, cheaters, and fembots abounded.

I am a battle-hardened veteran of 20 year effort to create and run a non-profit organization despite overwhelming forces against and widespread indifference to it.

I am a fortunate business entrepreneur who was lucky, curious, and motivated enough part of the coming of age of the PC and Internet revolutions.

I am a pissed off senior curmudgeon who is tired of being taken advantage by corporations and contractors. (driveway sealing pricing estimated ranging from $400 to $950) Got it done by talking one down from $750 to $550 by questioning his measurements, wrong by a factor of 2, and offering fresh and crispy Benjamin's as payment.

My first computer business joined and was paid off to the tune of hundreds of dollars, in a class action lawsuit against the major CRT monitor manufacturers for illegal price fixing.

My second computer business joined and was paid off to the tune of tens of thousands of dollars

in a class action lawsuit against major memory chip manufacturers for illegal price fixing.

I just joined a $2 million dollar class action lawsuit against a local hospital who put a Facebook Pixel on their patient charting page and public facing page to allow personal patient and visitor info to be scrapped by Meta.

My eyes have been opened for 50 years to the dirty world around me and now I really just don't like it more and more each day.

See my website if you want to read more realistic (red pill) doom and gloom, or as my ancestors would say Sturm und Drang.

Especially this recent one https://www.tcw.org/lefty/Short_Stories/The_Statue_of_Liberty_is_sailing_out_to_sea.pdf

Lefty

From: Cool Hand[coolhand@ProDigitalSoftware.com]
Sent: Sunday, July 16, 2023 2:42 PM
To: 'Lefty Insider' <lefty@tcw.org>
Subject: RE: Background of a progressive

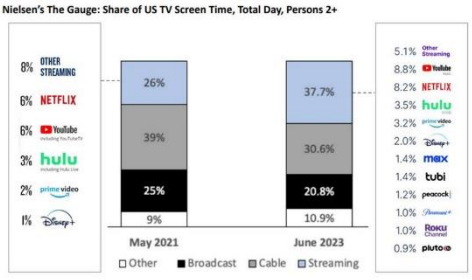
Hi Lefty,

I definitely "get" you and where you're coming from - and I share a lot of your views. ☺ At this point you have more time on your hands to fight than I do. But I do know a thing or two also about getting things done, especially at a distance - hence my well-intentioned advice to you.

You and I are a dying breed How many young folks today would hesitate to take something that's not theirs simply because doing so makes the world a worse place to live in? Everyone is now utterly blind to how their own actions influence the world. "Me first?" "It's just business?" "I'll take that and %$#@ you?" Where that ends is in a 3rd world country where one must constantly look over one's shoulder and it's impossible to succeed by hard work. Be more honest than the next guy? "Modern" folks might say "Why the hell would I want to do that?"

A new thing amongst youngsters is to tell Amazon the thing they got was broken or not delivered to get an instant refund of their purchase price AND get to keep the trinket. Cool Hand

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Wednesday, July 19, 2023 4:48 PM
To: Coolhand@ProDigitalSoftware.com
Subject: Misc. Bytes of News
I am surprised that Netflix has almost as much share as YouTube.
PS. 4k TV users like you (20Mbps) are jamming up the Internet and restricting my available bandwidth.
[:-0 Get a dish! Lefty



Conversations With An Internet Test Site Administrator

Anyone getting 1000Mbps from Spectrum...not me!
Rate this topic
LEFTY
Friday at 10:28 PM in Show off your speed
of Form

Posted Friday at 10:28 PM
On a one off test:

https://testmy.net/db/DNHLWKqaA.QIrNqsTnL

On a ten day, randomly every hour series of tests:
Minimum†
39.37 Mbps : 4.29 Mbps
Median†
435.42 Mbps : 32.21 Mbps
Maximum†
516.17 Mbps : 35.76 Mbps
?t=c&d=06-12-2023+%2F+06-23-2023&l=1000&q=658642493668's Speed Test Resultsmyaverage?q=658642493668&dateFull=06-12-2023+%2F+06-23-2023&clientTime=1&type=Comp_ID
Bottom of Form

- Quote
- 2 dy CA3LE changed the title to *Anyone getting 1000Mbps from Spectrum...not me!*

CA3LE

- Administrator
- ★★ Admin
  - 9.9k
- Location: 74 68 65 20 6D 61 74 72 69 78

And it looks like you're even worse when you don't multithread.
TestMy.net Test ID : wfCW0g4qY

You only have a few tests. Run some more tests with multithread disabled on the Colorado mirror and also test against New York and Dallas. Run a few tests against each, multithread off and on. I need more data to make a proper assessment.
Please sign up for the beta, you seem to understand how TestMy.net currently works and I'd love to have you test my new systems.
https://testmy.net/ipb/topic/34612-beta-testers-welcome
You also may have a connection issue I'd particularly like to see tested with the beta.
We can help get you up to speed.

1. **Please explain your network.** Help us also understand how your computer is connecting to your network. Is it on Wi-Fi or wired?
2. **What are the specs of the computer?**
3. **Which modem and router are you using?**
4. **Do you have another device you can test with?** An Android or iPhone works great. Even better if it's another hardwired computer, preferably a fresh OS install or one with known reliable performance characteristics. The newer the better.
    - Note: Separate these in the database with identifiers set in My Settings, then filter in My Results.

Having these questions answered combined with the extra results from different mirrors will help us better understand what might be going on.
Bottom line: You shouldn't have single thread running 8-10x slower than multithread. But we need more information to say that's happening for sure.

LEFTY

- Members
  3
- **Author**

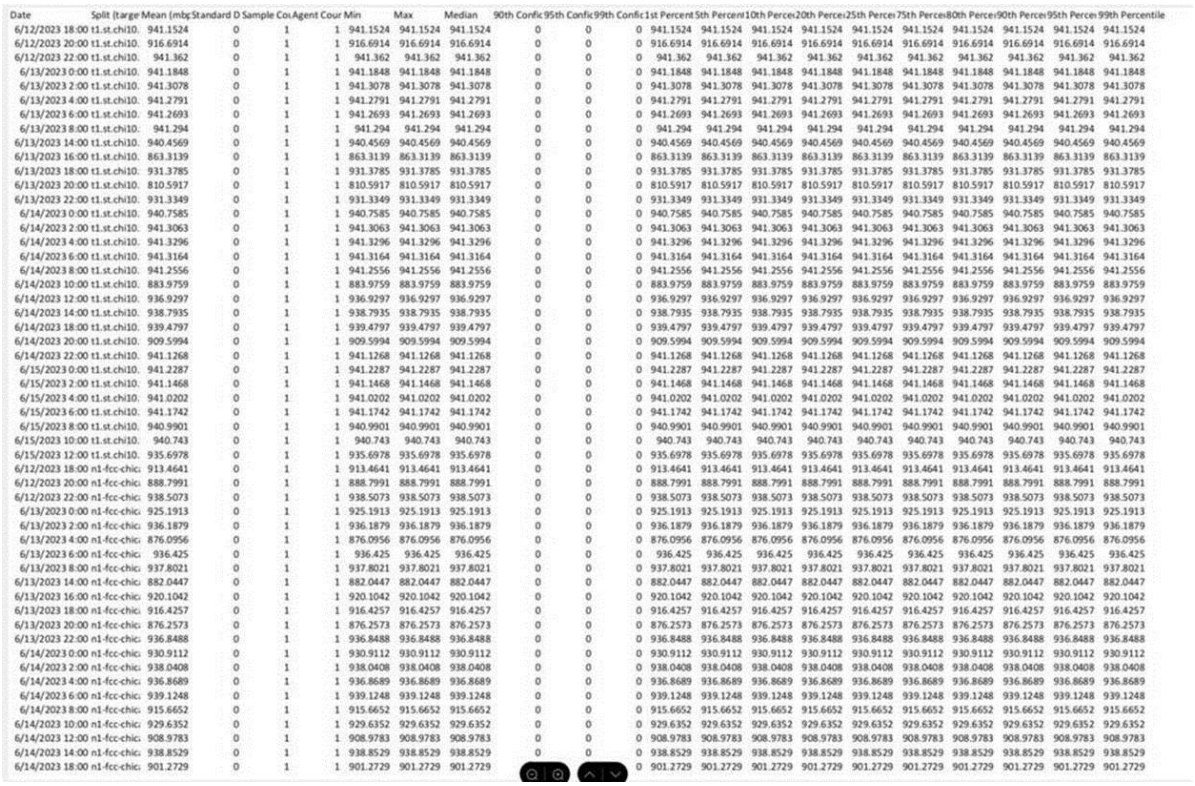
Thanks for your response. I do not know if I am up for all this additional testing. I have been continuously testing and arguing with Spectrum since Jan. I will think about it.
I have ten computers, and I hate phones. Computers are a mix of Win7 and Win10, desktops, laptops, tablets, and a NUC, all with gigabit wired ability.
Four are continuously wired and six normally wireless. I have long ago given up on testing wireless devices.
Router is Netgear Nighthawk XR1000 and modem is Hitron EN2251 with 2.5G Ethernet port. Cables are Cat6 and 7 (at the router).
Spectrum shipped me a SamKnows box but will only do limited testing and provide limited data, after first promising me log in credentials. So they are liars.

"t1.st.chi10.tbone.rr.com Mean Average 931 /38.9 Mbps
n1-fcc-chicago-us.samknows.com Mean Average 919/ 38.8 Mbps
The above and attached is all can get out of them to this point, and they like to talk like this:
"At some point we will need to agree to disagree that we have an obligation to ensure internet speed performance across the entirety of the world wide web. That being said, we are testing both on Spectrum network and off spectrum network as part of the SamKnows testing we are performing."

"We are following the SamKnows protocols to test the network we are responsible for operating which is consistent with the approach the FCC takes in testing ISP network performance."

So they invented this term called _off-net_ to try to defer responsibility for anything outside the Charter network SPECTRUMNET.

I did sign up for the beta however,
Lefty



Date	Split (targe	Mean (mbp	Standard D	Sample Co	Agent Cour	Min	Max	Median	90th Confic	95th Confic	99th Confic	1st Percent	5th Percent	10th Percer	20th Percer	25th Percer	75th Percer	80th Percer	90th Percer	95th Percer	99th Percentile
6/12/2023 18:00	t1.st.chi10.	941.1524	0	1	1	941.1524	941.1524	941.1524	0	0	0	941.1524	941.1524	941.1524	941.1524	941.1524	941.1524	941.1524	941.1524	941.1524	941.1524
6/12/2023 20:00	t1.st.chi10.	916.6914	0	1	1	916.6914	916.6914	916.6914	0	0	0	916.6914	916.6914	916.6914	916.6914	916.6914	916.6914	916.6914	916.6914	916.6914	916.6914
6/12/2023 22:00	t1.st.chi10.	941.362	0	1	1	941.362	941.362	941.362	0	0	0	941.362	941.362	941.362	941.362	941.362	941.362	941.362	941.362	941.362	941.362
6/13/2023 0:00	t1.st.chi10.	941.1848	0	1	1	941.1848	941.1848	941.1848	0	0	0	941.1848	941.1848	941.1848	941.1848	941.1848	941.1848	941.1848	941.1848	941.1848	941.1848
6/13/2023 2:00	t1.st.chi10.	941.3078	0	1	1	941.3078	941.3078	941.3078	0	0	0	941.3078	941.3078	941.3078	941.3078	941.3078	941.3078	941.3078	941.3078	941.3078	941.3078
6/13/2023 4:00	t1.st.chi10.	941.2791	0	1	1	941.2791	941.2791	941.2791	0	0	0	941.2791	941.2791	941.2791	941.2791	941.2791	941.2791	941.2791	941.2791	941.2791	941.2791
6/13/2023 6:00	t1.st.chi10.	941.2693	0	1	1	941.2693	941.2693	941.2693	0	0	0	941.2693	941.2693	941.2693	941.2693	941.2693	941.2693	941.2693	941.2693	941.2693	941.2693
6/13/2023 8:00	t1.st.chi10.	941.294	0	1	1	941.294	941.294	941.294	0	0	0	941.294	941.294	941.294	941.294	941.294	941.294	941.294	941.294	941.294	941.294
6/13/2023 14:00	t1.st.chi10.	940.4569	0	1	1	940.4569	940.4569	940.4569	0	0	0	940.4569	940.4569	940.4569	940.4569	940.4569	940.4569	940.4569	940.4569	940.4569	940.4569
6/13/2023 16:00	t1.st.chi10.	863.3139	0	1	1	863.3139	863.3139	863.3139	0	0	0	863.3139	863.3139	863.3139	863.3139	863.3139	863.3139	863.3139	863.3139	863.3139	863.3139
6/13/2023 18:00	t1.st.chi10.	931.3785	0	1	1	931.3785	931.3785	931.3785	0	0	0	931.3785	931.3785	931.3785	931.3785	931.3785	931.3785	931.3785	931.3785	931.3785	931.3785
6/13/2023 20:00	t1.st.chi10.	810.5917	0	1	1	810.5917	810.5917	810.5917	0	0	0	810.5917	810.5917	810.5917	810.5917	810.5917	810.5917	810.5917	810.5917	810.5917	810.5917
6/13/2023 22:00	t1.st.chi10.	931.3349	0	1	1	931.3349	931.3349	931.3349	0	0	0	931.3349	931.3349	931.3349	931.3349	931.3349	931.3349	931.3349	931.3349	931.3349	931.3349
6/14/2023 0:00	t1.st.chi10.	940.7585	0	1	1	940.7585	940.7585	940.7585	0	0	0	940.7585	940.7585	940.7585	940.7585	940.7585	940.7585	940.7585	940.7585	940.7585	940.7585
6/14/2023 2:00	t1.st.chi10.	941.3063	0	1	1	941.3063	941.3063	941.3063	0	0	0	941.3063	941.3063	941.3063	941.3063	941.3063	941.3063	941.3063	941.3063	941.3063	941.3063
6/14/2023 4:00	t1.st.chi10.	941.3296	0	1	1	941.3296	941.3296	941.3296	0	0	0	941.3296	941.3296	941.3296	941.3296	941.3296	941.3296	941.3296	941.3296	941.3296	941.3296
6/14/2023 6:00	t1.st.chi10.	941.3164	0	1	1	941.3164	941.3164	941.3164	0	0	0	941.3164	941.3164	941.3164	941.3164	941.3164	941.3164	941.3164	941.3164	941.3164	941.3164
6/14/2023 8:00	t1.st.chi10.	941.2556	0	1	1	941.2556	941.2556	941.2556	0	0	0	941.2556	941.2556	941.2556	941.2556	941.2556	941.2556	941.2556	941.2556	941.2556	941.2556
6/14/2023 10:00	t1.st.chi10.	883.9759	0	1	1	883.9759	883.9759	883.9759	0	0	0	883.9759	883.9759	883.9759	883.9759	883.9759	883.9759	883.9759	883.9759	883.9759	883.9759
6/14/2023 12:00	t1.st.chi10.	936.9297	0	1	1	936.9297	936.9297	936.9297	0	0	0	936.9297	936.9297	936.9297	936.9297	936.9297	936.9297	936.9297	936.9297	936.9297	936.9297
6/14/2023 14:00	t1.st.chi10.	938.7935	0	1	1	938.7935	938.7935	938.7935	0	0	0	938.7935	938.7935	938.7935	938.7935	938.7935	938.7935	938.7935	938.7935	938.7935	938.7935
6/14/2023 18:00	t1.st.chi10.	939.4797	0	1	1	939.4797	939.4797	939.4797	0	0	0	939.4797	939.4797	939.4797	939.4797	939.4797	939.4797	939.4797	939.4797	939.4797	939.4797
6/14/2023 20:00	t1.st.chi10.	909.5994	0	1	1	909.5994	909.5994	909.5994	0	0	0	909.5994	909.5994	909.5994	909.5994	909.5994	909.5994	909.5994	909.5994	909.5994	909.5994
6/14/2023 22:00	t1.st.chi10.	941.1268	0	1	1	941.1268	941.1268	941.1268	0	0	0	941.1268	941.1268	941.1268	941.1268	941.1268	941.1268	941.1268	941.1268	941.1268	941.1268
6/15/2023 0:00	t1.st.chi10.	941.2287	0	1	1	941.2287	941.2287	941.2287	0	0	0	941.2287	941.2287	941.2287	941.2287	941.2287	941.2287	941.2287	941.2287	941.2287	941.2287
6/15/2023 2:00	t1.st.chi10.	941.1468	0	1	1	941.1468	941.1468	941.1468	0	0	0	941.1468	941.1468	941.1468	941.1468	941.1468	941.1468	941.1468	941.1468	941.1468	941.1468
6/15/2023 4:00	t1.st.chi10.	941.0202	0	1	1	941.0202	941.0202	941.0202	0	0	0	941.0202	941.0202	941.0202	941.0202	941.0202	941.0202	941.0202	941.0202	941.0202	941.0202
6/15/2023 6:00	t1.st.chi10.	941.1742	0	1	1	941.1742	941.1742	941.1742	0	0	0	941.1742	941.1742	941.1742	941.1742	941.1742	941.1742	941.1742	941.1742	941.1742	941.1742
6/15/2023 8:00	t1.st.chi10.	940.9901	0	1	1	940.9901	940.9901	940.9901	0	0	0	940.9901	940.9901	940.9901	940.9901	940.9901	940.9901	940.9901	940.9901	940.9901	940.9901
6/15/2023 10:00	t1.st.chi10.	940.743	0	1	1	940.743	940.743	940.743	0	0	0	940.743	940.743	940.743	940.743	940.743	940.743	940.743	940.743	940.743	940.743
6/15/2023 12:00	t1.st.chi10.	935.6978	0	1	1	935.6978	935.6978	935.6978	0	0	0	935.6978	935.6978	935.6978	935.6978	935.6978	935.6978	935.6978	935.6978	935.6978	935.6978
6/12/2023 18:00	n1-fcc-chic	913.4641	0	1	1	913.4641	913.4641	913.4641	0	0	0	913.4641	913.4641	913.4641	913.4641	913.4641	913.4641	913.4641	913.4641	913.4641	913.4641
6/12/2023 20:00	n1-fcc-chic	888.7991	0	1	1	888.7991	888.7991	888.7991	0	0	0	888.7991	888.7991	888.7991	888.7991	888.7991	888.7991	888.7991	888.7991	888.7991	888.7991
6/12/2023 22:00	n1-fcc-chic	938.5073	0	1	1	938.5073	938.5073	938.5073	0	0	0	938.5073	938.5073	938.5073	938.5073	938.5073	938.5073	938.5073	938.5073	938.5073	938.5073
6/13/2023 0:00	n1-fcc-chic	925.1913	0	1	1	925.1913	925.1913	925.1913	0	0	0	925.1913	925.1913	925.1913	925.1913	925.1913	925.1913	925.1913	925.1913	925.1913	925.1913
6/13/2023 2:00	n1-fcc-chic	936.1879	0	1	1	936.1879	936.1879	936.1879	0	0	0	936.1879	936.1879	936.1879	936.1879	936.1879	936.1879	936.1879	936.1879	936.1879	936.1879
6/13/2023 4:00	n1-fcc-chic	876.0956	0	1	1	876.0956	876.0956	876.0956	0	0	0	876.0956	876.0956	876.0956	876.0956	876.0956	876.0956	876.0956	876.0956	876.0956	876.0956
6/13/2023 6:00	n1-fcc-chic	936.425	0	1	1	936.425	936.425	936.425	0	0	0	936.425	936.425	936.425	936.425	936.425	936.425	936.425	936.425	936.425	936.425
6/13/2023 8:00	n1-fcc-chic	937.8021	0	1	1	937.8021	937.8021	937.8021	0	0	0	937.8021	937.8021	937.8021	937.8021	937.8021	937.8021	937.8021	937.8021	937.8021	937.8021
6/13/2023 14:00	n1-fcc-chic	882.0447	0	1	1	882.0447	882.0447	882.0447	0	0	0	882.0447	882.0447	882.0447	882.0447	882.0447	882.0447	882.0447	882.0447	882.0447	882.0447
6/13/2023 16:00	n1-fcc-chic	920.1042	0	1	1	920.1042	920.1042	920.1042	0	0	0	920.1042	920.1042	920.1042	920.1042	920.1042	920.1042	920.1042	920.1042	920.1042	920.1042
6/13/2023 18:00	n1-fcc-chic	916.4257	0	1	1	916.4257	916.4257	916.4257	0	0	0	916.4257	916.4257	916.4257	916.4257	916.4257	916.4257	916.4257	916.4257	916.4257	916.4257
6/13/2023 20:00	n1-fcc-chic	876.2573	0	1	1	876.2573	876.2573	876.2573	0	0	0	876.2573	876.2573	876.2573	876.2573	876.2573	876.2573	876.2573	876.2573	876.2573	876.2573
6/13/2023 22:00	n1-fcc-chic	936.8488	0	1	1	936.8488	936.8488	936.8488	0	0	0	936.8488	936.8488	936.8488	936.8488	936.8488	936.8488	936.8488	936.8488	936.8488	936.8488
6/14/2023 0:00	n1-fcc-chic	930.9112	0	1	1	930.9112	930.9112	930.9112	0	0	0	930.9112	930.9112	930.9112	930.9112	930.9112	930.9112	930.9112	930.9112	930.9112	930.9112
6/14/2023 2:00	n1-fcc-chic	938.0408	0	1	1	938.0408	938.0408	938.0408	0	0	0	938.0408	938.0408	938.0408	938.0408	938.0408	938.0408	938.0408	938.0408	938.0408	938.0408
6/14/2023 4:00	n1-fcc-chic	936.8689	0	1	1	936.8689	936.8689	936.8689	0	0	0	936.8689	936.8689	936.8689	936.8689	936.8689	936.8689	936.8689	936.8689	936.8689	936.8689
6/14/2023 6:00	n1-fcc-chic	939.1248	0	1	1	939.1248	939.1248	939.1248	0	0	0	939.1248	939.1248	939.1248	939.1248	939.1248	939.1248	939.1248	939.1248	939.1248	939.1248
6/14/2023 8:00	n1-fcc-chic	915.6652	0	1	1	915.6652	915.6652	915.6652	0	0	0	915.6652	915.6652	915.6652	915.6652	915.6652	915.6652	915.6652	915.6652	915.6652	915.6652
6/14/2023 10:00	n1-fcc-chic	929.6352	0	1	1	929.6352	929.6352	929.6352	0	0	0	929.6352	929.6352	929.6352	929.6352	929.6352	929.6352	929.6352	929.6352	929.6352	929.6352
6/14/2023 12:00	n1-fcc-chic	908.9783	0	1	1	908.9783	908.9783	908.9783	0	0	0	908.9783	908.9783	908.9783	908.9783	908.9783	908.9783	908.9783	908.9783	908.9783	908.9783
6/14/2023 14:00	n1-fcc-chic	938.8529	0	1	1	938.8529	938.8529	938.8529	0	0	0	938.8529	938.8529	938.8529	938.8529	938.8529	938.8529	938.8529	938.8529	938.8529	938.8529
6/14/2023 18:00	n1-fcc-chic	901.2729	0	1	1	901.2729	901.2729	901.2729	0	0	0	901.2729	901.2729	901.2729	901.2729	901.2729	901.2729	901.2729	901.2729	901.2729	901.2729

Lefty 6-12-2023 to 6-16-2023.xlsx 23.44 kB·1 download

CA3LE

- Administrator
- Admin
  - 9.9k
- Location: 74 68 65 20 6D 61 74 72 69 78

On 6/24/2023 at 1:23 PM, Lefty said:
I don't know if I am up for all this additional testing.
Should only take you 10-15 minutes.
I'll make a video when I get to my console. Show you what I'm talking about.
... still reading your response. Just wanted to comment on that real fast.

CA3LE

- Administrator
- Admin
  - 9.9k
- Location: 74 68 65 20 6D 61 74 72 69 78

On 6/24/2023 at 1:23 PM, Lefty said:
*So they invented this term called _off-net_ to try to defer responsibility for anything outside the Charter network **SPECTRUMNET.***
It seems that they market themselves as an **Internet** provider, not an SPECTRUMNET provider. I would point that out to them.

Pretty clear language on their website. Says "Internet" everywhere. May want to point them to the ftc.gov Truth in Advertising.
I argue they should provide near the speed they advertise, TO THE INTERNET or they need to change how they market their product.
They do say, "Actual speeds may vary."
and then in your agreement (https://www.spectrum.com/policies/residential-internet-services-agreement)
e. Bandwidth.
i. Subscriber understands and agrees that Spectrum does not guarantee that any particular amount of bandwidth on the Spectrum network or that any speed or throughput of Subscriber's connection to the Spectrum network will be available to Subscriber.
If you really aren't seeing the 1 Gbps speed anywhere and are seeing more like 500 Mbps maybe just downgrade to the package speed you're actually seeing to save money.

In my area on Comcast it took well over a year or two after they released 'gigabit' before I ever saw anywhere near 1000 Mbps, anywhere.

One thing to check and consider if you downgrade, what are the upload speeds with the lower packages. I pulled pricing from their website to the Green Bay area and couldn't find the upload speed stated anywhere. You have really decent upload, over 30 Mbps.
I talked with an agent at Spectrum

I would need the exact address to be able to verify if the speed is available at that location.

300/10 upload 500/20 1000/35
Perfect, that's exactly what I needed. Thank you.
You're welcome, was there anything else I could assist you with today?

I think 20 Mbps upload is still very decent, obviously 35 is better. Again, if you really aren't seeing 1000 Mbps anywhere besides spectrum is $20 worth it to you only for the extra upload speed? For that price, I think it is.
At the end of the day, if you switch to a 500 Mbps plan, the only difference you may see is in the upload. Then try the Gigabit plan again later and you may find better results.
Personally, that 35 Mbps upload matters (though, my other options at the time only had 5 Mbps). I just stuck it out, over time Comcast got better and better in my area.

LEFTY

- Members
  - 4
- **Author**

Admin,
Regarding downgrading:
In 2021, amidst the pandemic, I was using a VPN and Tor to do my Dark Web research for my third and fourth books. Was also playing with a VM.
100 Mbps was not cutting it, I was also wireless at this point so I had that degradation despite upgrading my router to Wi-Fi 6 and network cards to wireless 802.11 ac/ax.
So I upgraded to their 300Mbps service and saw no improvement. So I started testing and emailing results, writing and producing a song rhyming Spectrum with Rectum, and after several months of insisting that I was the problem, they (a VP) reduced my price. To me this was an admission of guilt.
Meanwhile they say they bumped my service to 400Mbps. I believe this is a marketing technique to justify steady price increases and ward away potential competition in the area.
Then in 2023 they sent me a notice that I have a free upgrade to 500Mbps, them not knowing about the whole *letting sleeping dogs* lie thing.
So I started testing again, only now with Cat6/7 wired Ethernet, and could only get that speed inside of 200 miles within their SPECTRUMNET.
More like 90Mbps with FTP even then.
I suspected that they could not actually deliver a 1000Mbps service to my rural area, wanted to prove it, so I upgraded to that and again could only get that speed inside of 200 miles within their SPECTRUMNET.
I do not really need 1000, 500 would be fine if I could actually get it. There is no evidence that I can.
Yet because of this corporate monopoly, if I downgrade to 500 I will still pay the same $100 per month.
So I am stuck in some Charter Marketing Catch-22 bullshit here.
Hence the pissed off nature of my correspondence, and my continuing persistent and relentless battle.
Thank you for our response and advice,
Lefty

From: Admin [mailto:admin@testmy.net]
Sent: Monday, June 26, 2023 3:43 PM
To: lefty@tcw.org
Subject: Spectrum
What are your books about?
Forward me those emails too ;)
- Admin
On Mon, Jun 26, 2023 at 2:59 PM Lefty Insider <lefty@tcw.org> wrote:
Well hello Admin,
I am on the forum as Lefty Insider a writer's alias.
My first four books published at leanpub.com.
Working on two more now, one imminent and one more long term.

- The first book is a story of someone growing up at the same time as the personal computer and the Internet. A coming of age story, or Bildungsroman as my ancestral Germans would say.
- The second book picks up where that left off and what is was like to be a very displeased Windows 10 beta tester.
- The third book is all about the noncriminal activity that is going on, in the Dark Web.
- The fourth book is an encyclopedic guide to the Dark Web. A "how to" guide if you will.

They are all partly historical fiction, highly illustrated and formatted, occasionally autobiographical, and somewhat humorous if I say so myself.
https://leanpub.com/bookstore?search=Lefty Insider&type=all&page=2
Will forward some relevant previous email correspondence,
Lefty

My next book, historical fiction novel, will be in the same vain as these nonfiction publications:

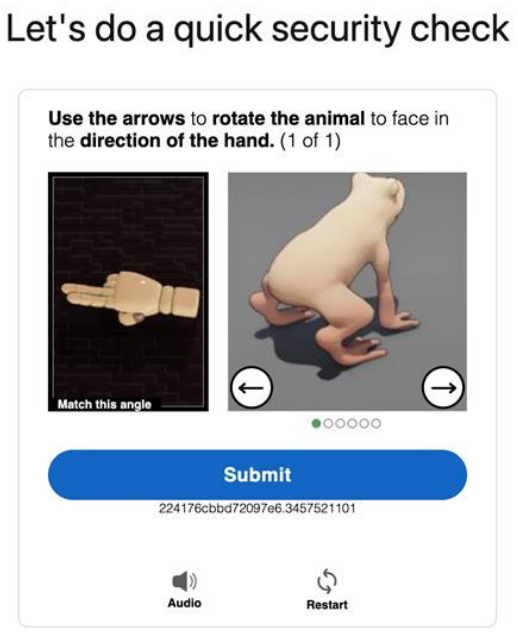
The Book of BROKEN PROMISES
https://www.tcw.org/lefty/Short Stories/Telecom Book of Broken Promises.pdf
$200 Billion Broadband Scandal
https://www.tcw.org/lefty/Short Stories/$200 Billion Broadband Scandal.pdf

And some of my essays:

Rural Broadband
https://www.tcw.org/lefty/Short Stories/Rural Broadband.pdf
Broadband Internet for All
https://www.tcw.org/lefty/Short Stories/Broadband Internet for All.pdf
Free the Internet
https://www.tcw.org/lefty/Short Stories/Free the Internet.pdf

Happy reading,
Lefty

From: Admin [mailto:admin@testmy.net]
Sent: Wednesday, June 28, 2023 1:34 AM
To: Lefty Insider <lefty@tcw.org>
Subject: Re: Spectrum rhymes with getting it in the Rectum
Hey Lefty,
Very interesting reads. Did they ever respond? Particularly the VP?
I was just pulling him up, Linked-in came up and look at this bot security question, lol.



Before reading anything, I was like, "uuuhhhh, what?!"-- I guess bots can't figure out how to finger frogs.
Anyways... Another unhappy Spectrum user just posted...
https://testmy.net/ipb/topic/34639-issue-with-spectrum-upload-speeds/
Same story over and over again. They only accept speed test results from their own Ookla (speedtest.net) servers.

"Called them a few times and they would basically tell me your speeds are fine to our speedtest.net spectrum servers and we cant do anything but send out our techs."
It's a scam that too few people are aware of unfortunately. Been business as usual for them for a very long time now. Before, most ISPs in general used to send people to TestMy.net. Employees of various ISPs reported to us that they even had TestMy.net in their employee handbooks, *"they taught us about it the first day in training class.* "Until I denied them abilities that allow them to manipulate the test, abilities Ookla gives them.
ISPs have asked me, *"can we adjust the cut offs?"*
Me, "what?!"
ISP, *"Yeah, with the license we have with Ookla we can remove portions of the result to drop off the parts we don't want calculated."*
Me, "**no**, and if you want a test server on your network you need to get me a VPS server with root access. I'll set up and maintain everything as a part of my network."
I offered that to dozens of ISPs who've contacted me over the years. Never even once did they take me up on the offer. Again, they contacted me! Once they know I only play ball under my own rules, crickets.

I won't offer that to them anymore. I could care less if I have servers within their networks, it's the Internet not SPECTRUMNET. People need to be testing to the internet and ISPs need to perform against the internet.
But nobody even knows the difference, nobody reads anymore.
Oh well, at least we know.
I'm trying to develop a test that they can't ignore. I'll need your help to spread the word.
I argue that the **only** valid Internet speed test results are outside of the ISP's network. SPECTRUMNET work tests should only be performed as a best case comparison. Maybe one day more people will understand the difference and join us.
- Admin - TestMy.net

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Wednesday, June 28, 2023 9:21 AM
To: 'Admin' <admin@testmy.net>
Subject: RE: Spectrum rhymes with getting it in the Rectum
Admin,
After going through multiple Spectrum technicians, I have had ongoing dialogs first with a guy named Evan at 'spectrumchatsupportengineers@charter.com' until I wore out his patience (March 19 to March 28) and he basically told me that there was nothing I could do to convince them that they were wrong. Not buy my own modem, not buy a brand new PC, nothing.
So I went over his head to the VP and have had an ongoing dialog from March 31 until last week when he went on vacation and I have not heard from him since.
So I upped the ante and complained to the WI AG and the BBB.

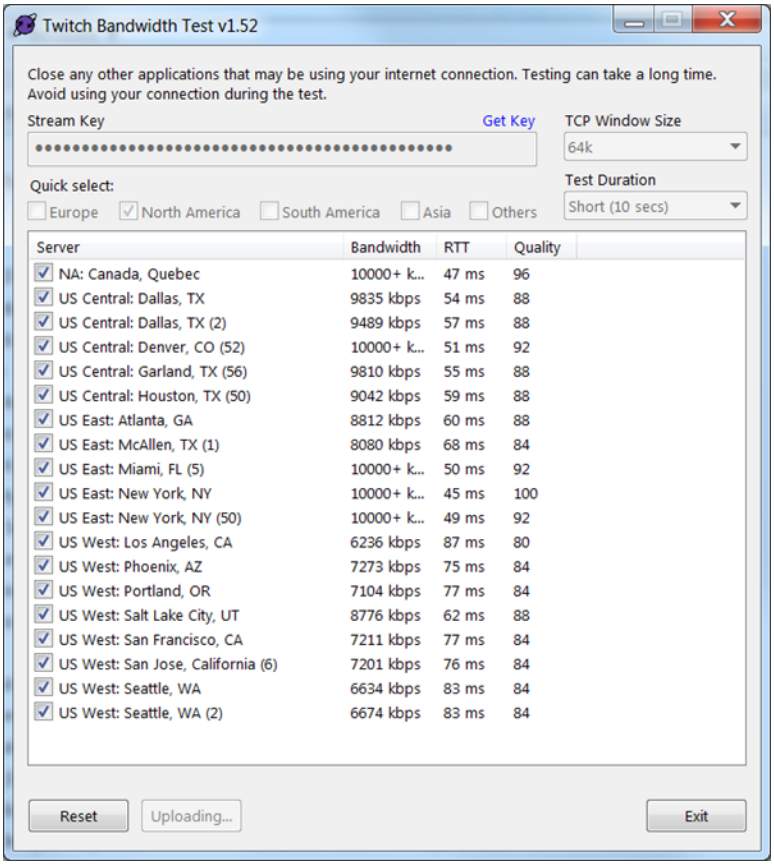
I just wrote this:

> *From a former mechanic's point of view, using speedtest.net is like putting a voltmeter on a battery, seeing 12 volts of surface voltage and pronouncing it good. This is what phones and wireless devices do especially the newer ones with multiple radio antennas.*
>
> *The real test of a battery or an Internet connection is to put a load against it. Only a load tester for a battery can put a partial discharge against it, or a real Ethernet connected computer to put a sufficient packet download against it, can provide a true test.*

This could explain why most cellphones and some wireless computers give overly fast results.
And **makes the test too short** to accurately measure speed, especially as compared to Ethernet wired connections. I can understand why they use that for marketing, but it is not realistic, or in my view legitimate.
Multiple antennas and multiple I/O streams (multipath propagation), MU-MIMO technology: 2x2, 3x3, 4x4. https://en.wikipedia.org/wiki/MIMO
PS. I got 943Mbps with the wireless Surface tablet on speedtest.net standing at the router.
Lefty

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Wednesday, June 28, 2023 9:40 AM
To: 'Admin' <admin@testmy.net>
Subject: RE: Spectrum rhymes with getting it in the Rectum
Admin,
If you thought that security check was funny, you should get a kick out of this:
Crank the volume to 11.
https://www.tcw.org/Got the Spectrum Blues.mp3
I wrote the lyrics in 2021 and paid a kid on fiver to add the vocals and music.
Enjoy,
Lefty

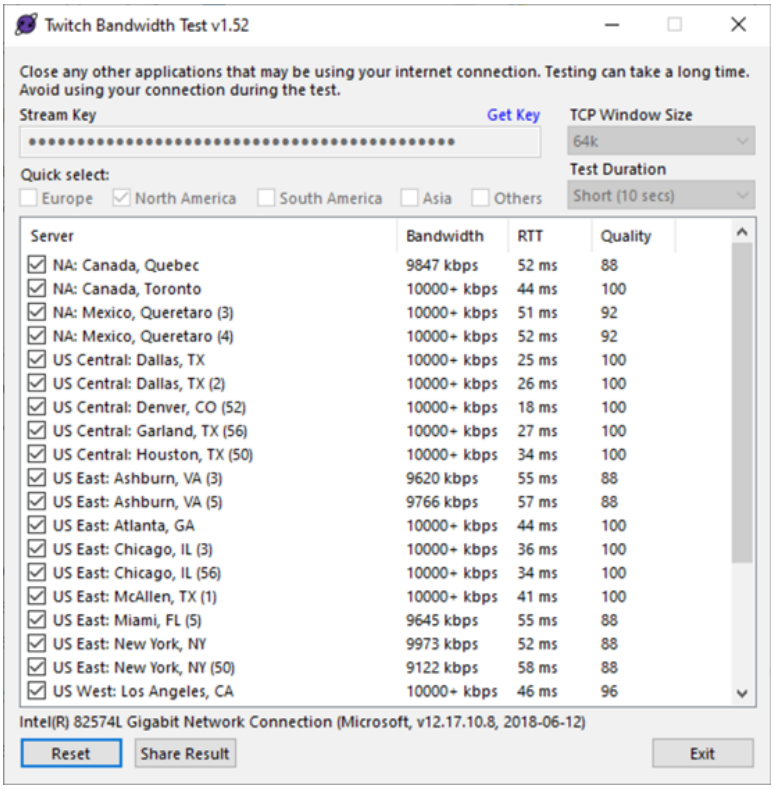
From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Wednesday, June 28, 2023 11:22 AM
To: 'Admin' <admin@testmy.net>
Subject: RE: Spectrum rhymes with getting it in the Rectum
Admin,
I don't really know anything about twitch, but what do you think of this result?
Lefty



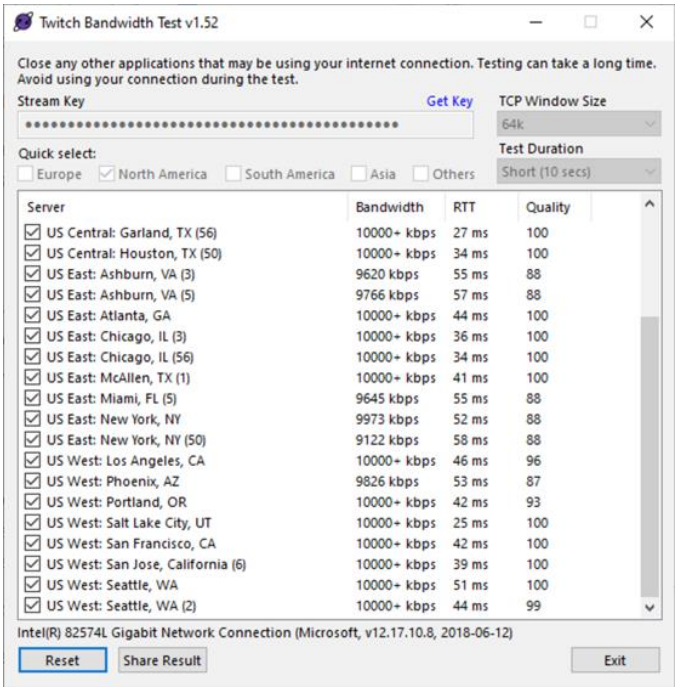
From: Admin [mailto:admin@testmy.net]
Sent: Wednesday, June 28, 2023 12:04 PM
To: Lefty Insider <lefty@tcw.org>
Subject: Re: Spectrum rhymes with getting it in the Rectum
Lefty,
I like your battery analogy. Although, when I think about it that's just trading one thing most people don't understand with another. You and I get it, people like us get it but the vast majority not so much.
What a great song, nice lyrics. Awesome you got someone on fiver.com to do that... he did a really good job, well produced.
You should post that on TMN, either a new topic or attached to your current topic. Other users, especially Spectrum users, will get a kick out of it.

Here's what's coming across my interface during that twitch test.

So, only 19.2 Mbps... but this looks like it's more of a quality test.
Here's what I got

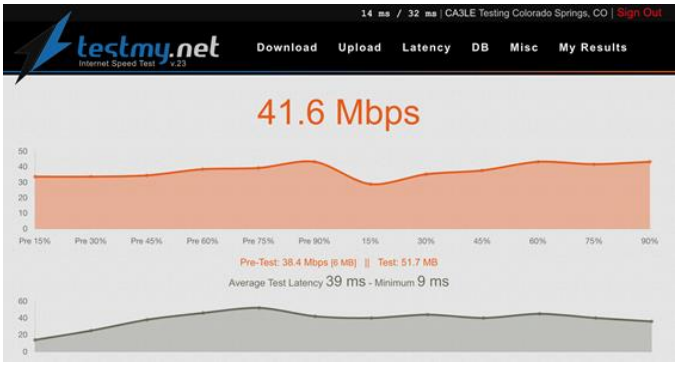


mine listed more servers than yours



For comparison here's a TMN result from the same time

(beta - multithreaded)
41.6 Mbps [5.2 MB/s] | Uploaded 51.7 MB in 9.94 seconds
Pre-Test: 38.4 Mbps [4.8 MB/s] | Uploaded 6 MB in 1.25 seconds
Upload Graph: [33.6,33.6,34.4,38.4,39.2,43.2,28.8,35.2,37.6,43.2,41.6,43.2]
Test Latency 39 ms Avg - 9 ms Min
Latency Graph: [14,25,38,46,52,42,40,44,40,45,40,36]
Locale: co.testmy.net
Graph & Validate: https://testmy.net/x/tmn?resultID=oDm8nLOh



(single thread)
:::.. Upload Speed Test Result Details ..:::
Upload Connection Speed:: 38981 kbps or 39 Mbps
Upload Speed Test Size:: 38.6 MB or 39552 kB or 40501248 bytes
Upload Binary File Transfer Speed:: 4873 kB/s or 4.9 MB/s

Tested At:: https://TestMy.net
Validation:: https://testmy.net/db/Q454AlhLa
Client Stats:: https://testmy.net/quickstats/CA3LE https://testmy.net/compID/6532027578876
Test Time:: 2023-06-28 09:44:49 Local Time
Client Location:: Monument, CO US https://testmy.net/city/monument_co
Target:: Colorado Springs, CO https://co3.testmy.net
Client Host:: Comcast Cable https://testmy.net/hoststats/comcast_cable
Compare:: 2% < client avg, 77% > host avg, 27% > city avg, 52% > country avg, 158% > world index
1MB Upload in 0.21 Seconds - 1GB Upload in ~4 Minutes
This test of exactly 38.63 MB took 8.312 seconds to complete
User Agent:: Mozilla/5.0 Macintosh; Intel Mac OS X 10_15_7 AppleWebKit/537.36 KHTML, like Gecko Chrome/114.0.0.0 Safari/537.36 [!]

https://github.com/notr1ch/TwitchTest
"TwitchTest creates a test stream to Twitch, using the "?bandwidthtest" option so your channel doesn't actually go live. It will attempt to stream at up to 10 Mbps and show the achieved bitrate for each server. An estimation of the connection quality is presented, which is based on the number of retransmissions required and how consistent the delay between consecutive sends are. **A connection quality of 80+ is recommended for a reliable stream.** The TCP window size (SO_SNDBUF) can be adjusted to see what effects it has, the default setting matches what is used in OBS."
According to that, you're looking good. Mine's running better, with less retransmissions on average but yours still appears to be running very good. Your upload results on TMN back this up.
-Admin

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Wednesday, June 28, 2023 12:51 PM
To: 'Admin' <admin@testmy.net>
Subject: RE: Spectrum rhymes with getting it in the Rectum

Admin,
Ok, will post it.
I deselected some of the servers, i.e. Canada, Mexico, Chicago, and Reston, VA as I would expect good speed to the old MAE-East Internet exchange, so the test results would fit on a single screen shot.
Your tests do not fade to the west coast as mine do. Ideas?
My real issues include what you will see in my next email to Spectrum.

CA3LE

-
- Administrator
- Admin
  - 9.9k
- Location: 74 68 65 20 6D 61 74 72 69 78

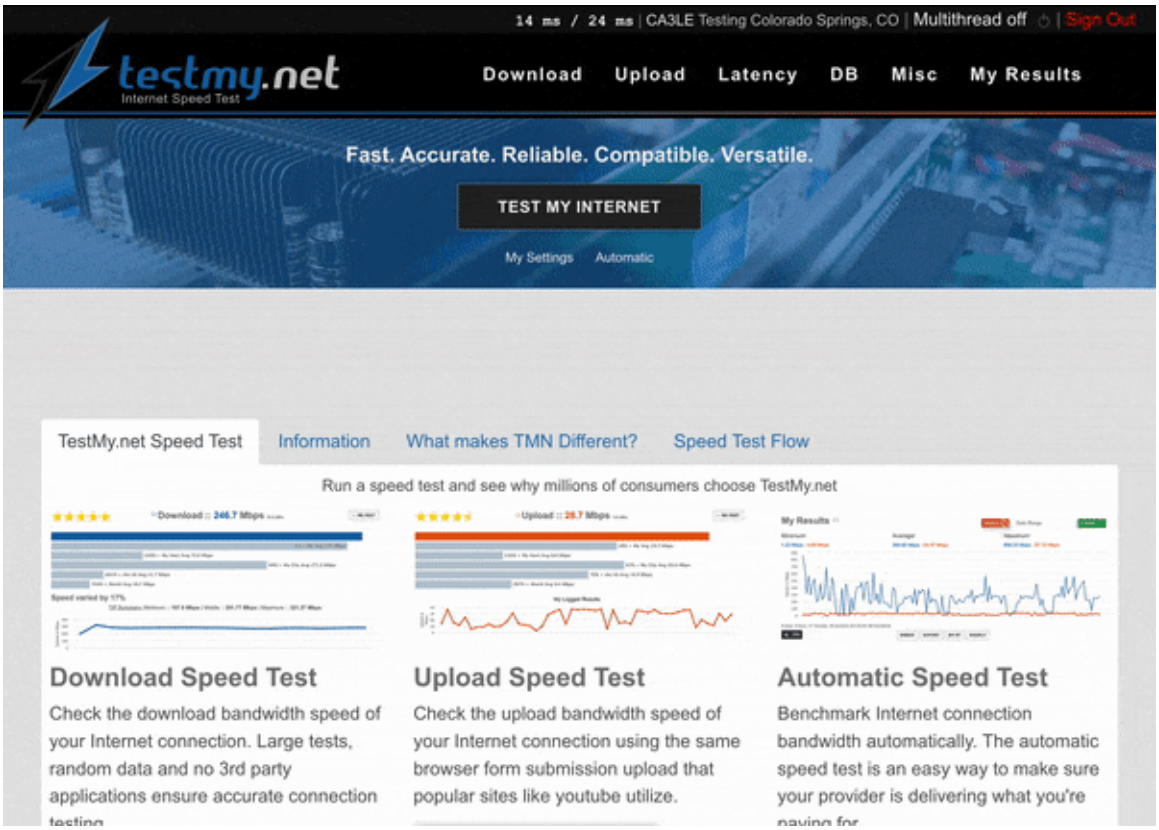
On 6/24/2023, Lefty said:

I don't know if I am up for all this additional testing.

On 6/24/2023 at 1:44 PM, CA3LE said:

I'll make a video when I get to my console. Show you what I'm talking about.

Quickly enable and disable multithread, run some tests with it enabled and some disabled for comparison.



LEFTY

- Members
  - 9

- **Author**

Ok, so I took a closer look at the test data and created this spreadsheet attached.
Massive difference with multithread on/off to all three server locations.
What does this tell you?

?t=u&d=07-04-2023&l=1000&q= Speed Test Results

--07-04-2023---testmy.net-stats.xlsx 12.49 kB · 3 downloads

CA3LE

-
- Administrator
- Admin
  - 9.9k
- Location: 74 68 65 20 6D 61 74 72 69 78

On 7/4/2023 at 3:01 PM, Lefty said:
Massive difference with multithread on/off to all three server locations.
What does this tell you?

That's showing me that something is majorly amiss. If you can run the same set of experiments on another hardwired computer for comparison we can narrow down what's happening better.

I recommend using Identifiers, if you click on My Settings a drop down with choices will come up. This will help us differentiate the results from each other.

A comparison will help us determine if the problem is local to that machine or if it's network-wide.

I see the laptop tests you've been running since our email. Seems like you're getting the same there. I'll respond back on this in a bit.

CA3LE

-
- Administrator
- Admin
  - 9.9k
- Location: 74 68 65 20 6D 61 74 72 69 78

The next test I would perform would be to remove the router from the equation.

Connect your modem directly to one of your hardwired computers. You'll then need to power cycle the modem, unplug and wait 10 seconds and plug it back in. This connects the modem to the device mac address. When you return it to the router you'll need to repeat this.

Repeat the test. Give the computer a different identifier so we can differentiate. Multithread off and on.

I know you've already been through a lot but I think you're on the right track to getting it resolved now. Stick with me.

LEFTY

-
- Members
  - 9

- **Author**

So I have run this test with six of my computers, multithread on, off, and to the same three test servers. I have been doing this on and off for three years now and connecting directly to the modem makes no difference at all.
The router is a Netgear Nighthawk XR1000 at default settings and Spectrum used it to pronounce my connection all good.

Why so much difference on all computers?

CA3LE

-
- Administrator
-
  - 9.9k
- Location: 74 68 65 20 6D 61 74 72 69 78

The computer you set as "Work" was able to pull faster speed.

TestMy.net Test ID : xSC9P4N5t

Still leaves much to be desired but it's consistently 2-3X faster performing the linear test than the computer with the "Office" ID.

TestMy.net Test ID : 7kCVzVEII

So it doesn't appear to be a network-wide bottleneck. If it was you'd see very similar results.

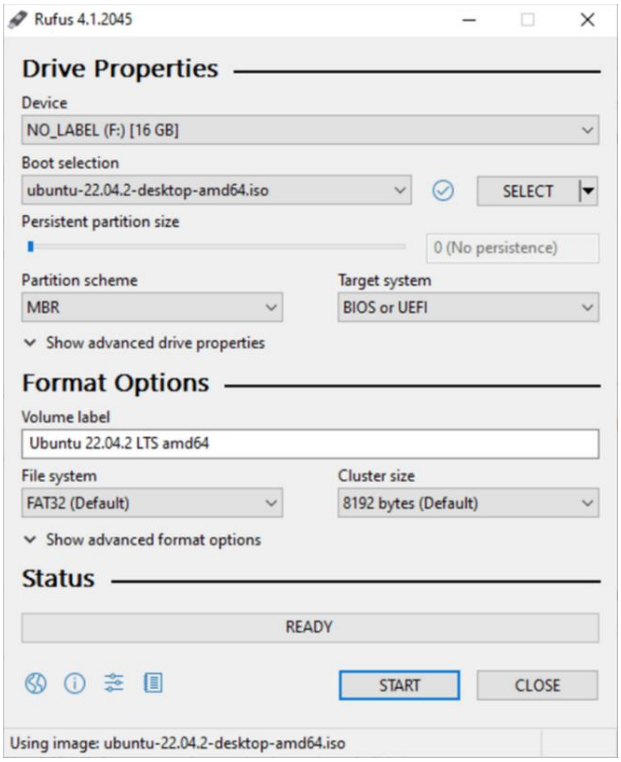
This is a really hard one.

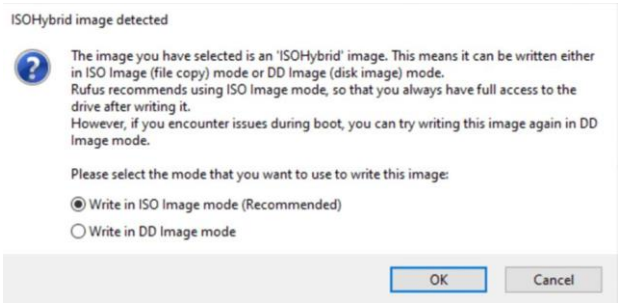
Let's focus on the PC that has the greatest drop, **Office**.

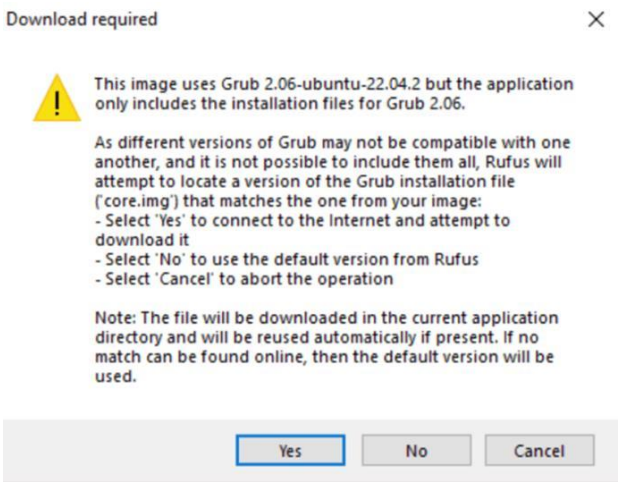
I'd eliminate the operating system and all installed programs from the equation.

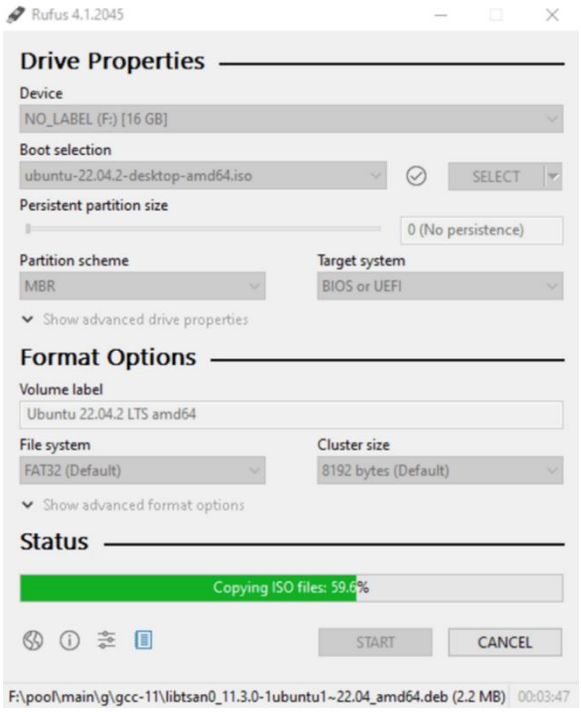
To do this all you need is a USB flash drive. This is a little more advanced but you seem to be an advanced user.

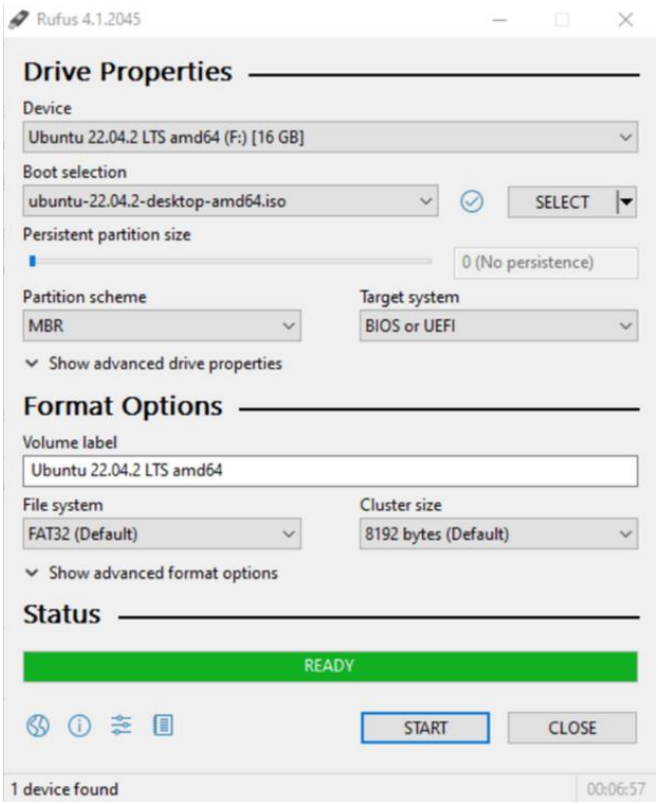
1. Download rufus from https://rufus.ie/en/ (you'll use this to create the bootable USB)
2. Download Ubuntu from
   - guide at https://ubuntu.com/tutorials/try-ubuntu-before-you-install
   - rufus has an option to download the ISO for you, I personally prefer doing 2 steps.
3. Open rufus, select device (the USB) and select the ISO image (rufus correctly fills in the rest) then click "Start"






Download required
This image uses Grub 2.06-ubuntu-22.04.2 but the application only includes the installation files for Grub 2.06.
As different versions of Grub may not be compatible with one another, and it is not possible to include them all, Rufus will attempt to locate a version of the Grub installation file ('core.img') that matches the one from your image:
- Select 'Yes' to connect to the Internet and attempt to download it
- Select 'No' to use the default version from Rufus
- Select 'Cancel' to abort the operation
Note: The file will be downloaded in the current application directory and will be reused automatically if present. If no match can be found online, then the default version will be used.
Yes
No
Cancel


Rufus 4.1.2045
Drive Properties
Device
NO_LABEL (F:) [16 GB]
Boot selection
ubuntu-22.04.2-desktop-amd64.iso
SELECT
Persistent partition size
0 (No persistence)
Partition scheme
MBR
Target system
BIOS or UEFI
Show advanced drive properties
Format Options
Volume label
Ubuntu 22.04.2 LTS amd64
File system
FAT32 (Default)
Cluster size
8192 bytes (Default)
Show advanced format options
Status
Copying ISO files: 59.6%
START
CANCEL
F:\pool\main\g\gcc-11\libtsan0_11.3.0-1ubuntu1~22.04_amd64.deb (2.2 MB)
00:03:47



    - Now you have an Ubuntu live USB
4. Reboot your computer with the USB plugged in.
    - You may need to use the boot menu to boot from USB, the key you need to press on startup differs by manufacturer. Most common can be found at https://www.boot-disk.com/quest_bootmenu.htm-- some systems show you what you need to press on startup, others just show a splash screen.
5. As it's booting select "Try" whenever it prompts you. (twice)

Once the live USB boots up you'll have a normal desktop with Firefox browser with the option to install Ubuntu, completely isolated from your Windows install. Obviously you don't want to install it, only use the desktop for testing. Open Firefox, sign-in to TMN and repeat your testing. Keep in mind you're running on a USB so starting Firefox will be slower but once programs are in RAM they'll perform well for you.

Note: I tried this myself just now and couldn't get video to properly display. Because the discrete graphics card needs proper drivers with a full install. To fix this power off and connect to the onboard video. After that I was able to load it up and test.

Multithread: TestMy.net Test ID : teT8Ud7RN

Linear: TestMy.net Test ID : UuMQH4oaw

What I'd expect to see, exactly the same performance as my properly running Windows 10 install on that machine. First try, maxed it out.

If you do this test and your speed shoots up all of a sudden... then we have something.

After that you can use your Live USB to quickly repeat testing on other machines.

There may be something software related, something in common between the computers that could be causing issues. It's common for TMN to pick up on this when other tests don't by the way. **Using the method outlined above you eliminate those variables by using a known good configuration.**

Give it a try and let us know what you find.

> ***Note: Including the ISO download it took only about 10-15 minutes to follow my own guide and get test results.***

LEFTY

- Members
  - 0

I will remind you that my OP was showing sub 500Mbps across ten days testing every hour testing with MT ON.

Now based on your advice I see a big difference between MT and no MT. **This occurs on all six tested computers.**

It really doesn't matter what the highest speed is, as they are all substandard. And based on prior testing this goes for my other four computers as well.

So let’s stop talking about my computers and get on to why the MT and no MT performance is so different. Double speed with it ON. See the attached spreadsheet for details.

You are starting to sound like Spectrum here blaming the router and the computers. They blamed my router and also used it to pronounce my connection good. They blamed my computers except when I could occasionally get a good speedtest.net score to their favorite location.

I have been building and using computers since 1987.

I have a newish known good router and ten computers that cannot be all bad. I have desktops, laptops, SFF, NUC and tablets.

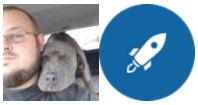
In terms of software, MS antivirus and firewall, mix of Brave and Firefox browsers, mix of Win7 and Win10, all with 1Gbps Ethernet connected with Cat 6/7 cables.

There is nothing special about the software loads, MS Office, Norton Ghost for backups, Adobe Acrobat, Adobe CS6, FTP software and Web authoring software for maintaining my website. I use Word for writing my books and a browser for research. That is about it.

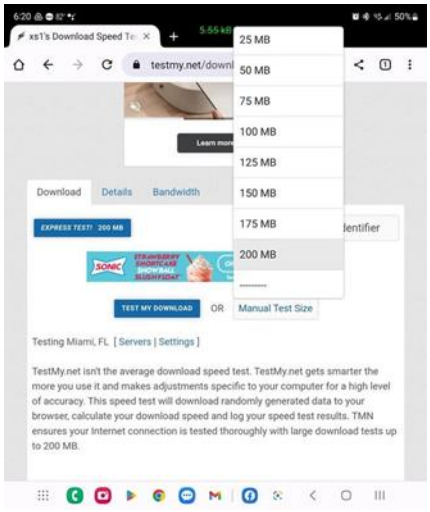
I monitor bandwidth use with GlassWire, and have shut off all telemetry of any kind.

07-04-2023-edited-testmy.net-stats.xlsx 57.9 kB · 2 downloads

xs1



- Moderators
- Staff
  - 4.8k
- Location: D- Mbps 919.48 / U- Mbps 942.24



So you clearly show better results with larger test files. Have you tried skipping the automated test and just manually putting it to 200 on all your pcs? My guess is your results will be much better when you're skipping the smaller insignificant files. Your connection may just need time to ramp

LEFTY

- Members
  - 2

By looking again at the spreadsheet data, I can see that this is generally but not exclusively true.

However I am not trying to tune my PC's to do well on these tests. I have already eliminated some speed deterrents like Zone Alarm AV and Firewall, and fine-tuned my DNS and eliminated hosts files.

I am trying to test definitively, in a world full of bad tests, and also understand why I cannot get what I am paying for geographically outside of SPECTRUMNET.

Rather than going through the whole Linux ordeal above, I have another hard disk with a clean Win11 install on it. I don't use it because Win11 is functionally unusable to anyone who knows how to use a computer.

Anyway I will swap it out, suffer through it and will test with that.

Ok, so windows 11 with Edge

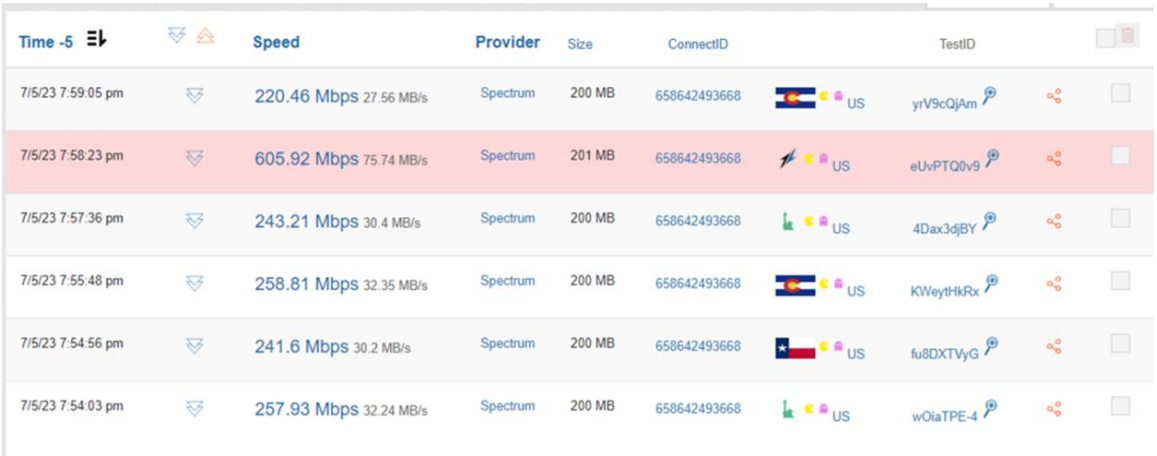
First three tests are with MT OFF

Next three tests are with MT ON

OS, browser, don't seem to matter much.

Shit results.

?t=u&d=07-05-2023&l=25&z=20&q='s Speed Test Results



Time -5	Speed	Provider	Size	ConnectID		TestID
7/5/23 7:59:05 pm	220.46 Mbps 27.56 MB/s	Spectrum	200 MB	658642493668	US	yrV9cQjAm
7/5/23 7:58:23 pm	605.92 Mbps 75.74 MB/s	Spectrum	201 MB	658642493668	US	eUvPTQ0v9
7/5/23 7:57:36 pm	243.21 Mbps 30.4 MB/s	Spectrum	200 MB	658642493668	US	4Dax3djBY
7/5/23 7:55:48 pm	258.81 Mbps 32.35 MB/s	Spectrum	200 MB	658642493668	US	KWeytHkRx
7/5/23 7:54:56 pm	241.6 Mbps 30.2 MB/s	Spectrum	200 MB	658642493668	US	fu8DXTVyG
7/5/23 7:54:03 pm	257.93 Mbps 32.24 MB/s	Spectrum	200 MB	658642493668	US	wOiaTPE-4

Well, that was an ordeal I won't wish on anyone.

CA3LE

-
- Administrator
-
  - 9.9k
- Location: 74 68 65 20 6D 61 74 72 69 78

Lefty said:
So let's stop talking about my computers and get on to why the MT and no MT performance is so different. Double speed with it ON. See the attached spreadsheet for details.
You are starting to sound like Spectrum here blaming the router and the computers.

I'm trying to give you ammunition to go back to Spectrum with so I'm suggesting that you get ahead of them and check these boxes.
If you're getting 250 Mbps on the Linear test, you're doing pretty good. Especially in a rural area.
The one I was concerned about is where you're getting 40 Mbps. Something is preventing that install from performing.
If you just booted that Windows 11 fresh install on that machine and now it's pulling 250 Mbps instead of 40 Mbps. There you go... something is holding that machine back, software wise.
Don't expect linear to perform as well as multithread, it's very difficult to score like @xs1 does for example (1000 Mbps linear results). Look at mine, I get 400 maybe 500 if I'm lucky and then 800-950 multithread. What you're looking for is to establish that baseline on your best running machine, understand how your connection normally runs on TMN and if you see a huge variation (like 40 Mbps instead of 250 Mbps) then you know something is amiss.
When you show me two hardwired computers on your network and one of them is running vastly different it often points to software. Or something else unique to that device like it's network card or ethernet cable.
You very well may have deeper connection issues, I just want to cover bases. You've told me a lot about your situation but remember I wasn't there. I don't know all of the things you've done yet... and if you want to do have me be witness and give my recommendations then you need to understand that I need to see the tests performed a certain way before I can understand what might be happening. I know you've done some of the steps before but I wasn't there.
If you can get all of your machines running over 200 Mbps in my linear tests I bet that your other connection issues will be gone. Everything will run better.

LEFTY

-
- Members
  - 2

"If you're getting 250 Mbps on the Linear test, you're doing pretty good. Especially in a rural area. "

So 250 linear and 500 MT I should consider good? I am paying $100 a month for 1000, and I should be happy?

My buddy in Florida says:

"https://internetspeedtestx.com/ seems to accurately show me my advertised speeds. 250Mbps Hotwire fiber."

I get 80Mbps on that site to a test server in VA.

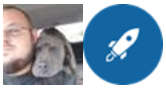
He also sees 250 to testmy.net, Miami and CO.

"If you just booted that Windows 11 fresh install on that machine and now it's pulling 250 Mbps instead of 40 Mbps. There you go... something is holding that machine back, software wise. "

You are forgetting that these tests are simply short term snapshots. **On my ten day test, my low was 40, Median 436 an Max 516.**

You are also forgetting that this issue is across 6-10 computers. Again, it is not a router or computer issue and I was hoping you could help me find it.
You originally came off to me as a guy who knew a lot and has been doing this a long time.
There is a lot of big talk, hubris, and bragging by the author of this website.
All I have discovered with your site is what is leading me to question the bandwidth and rigor at your test servers.
But in the end, at a loss for an explanation, you are saying that I should be happy for what I have.
Disappointed.

xs1

- 
- Moderators
- Staff
  - 4.8k
- Location: D- Mbps 919.48 / U- Mbps 942.24

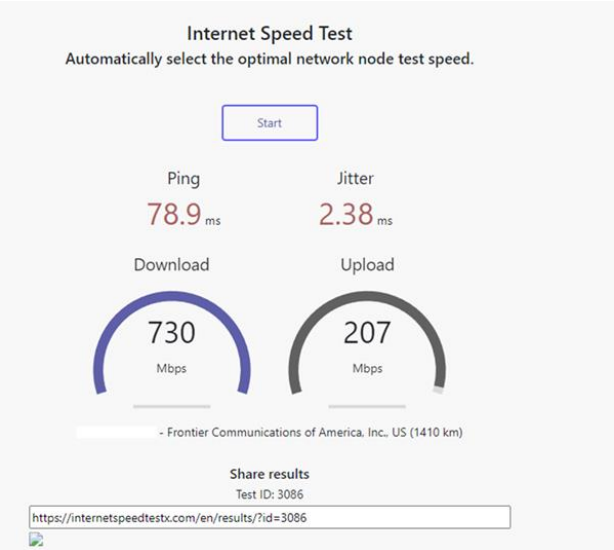
CA3LE said:

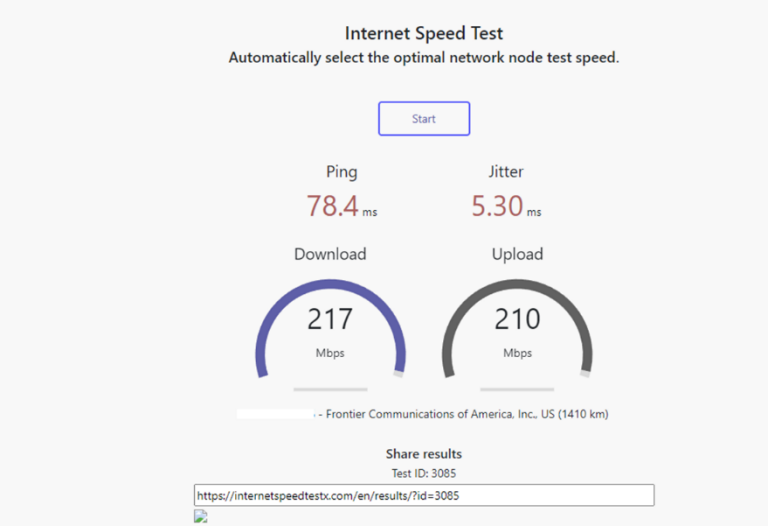
Don't expect linear to perform as well as multithread, it's very difficult to score like @xs1 does for example (1000 Mbps linear results). Look at mine, I get 400 maybe 500 if I'm lucky and then 800-950 multithread. Every connection is obviously unique. In my case, I find that linear works better because of routing. If the other servers/connections on the "multi" test are poor routing it'll generally slow down the entire test. Now in other cases, multi-thread works better on my connection if the routing is ideal for all servers/connections involved. There are alot of variables involved.

Lefty said: My buddy in Florida says:
"https://internetspeedtestx.com/ seems to accurately show me my advertised speeds. 250Mbps Hotwire fiber."
I get 80Mbps on that site to a test server in VA.

He also sees 250 to testmy.net, Miami and CO.

Firstly, That test is inconsistent, hot garbage.





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All I have discovered with your site is what is leading me to question the bandwidth and rigor at your test servers.
But in the end, at a loss for an explanation, you are saying that I should be happy for what I have.
Disappointed.

Lastly,

I'm going to be honest with you bud, I dont appreciate the disrespect your coming with right now. Firstly, there are thousands of people with actual fiberoptic & datacenter level connections who pull ungodly speeds from testmy.net & its host. Bandwidth & server specs are absolutely not in play here. TMN is on a

10 gig backbone. I have a 1 gig symmetric connection and pull in cases over 1.3 gbit. Last thing you'll do here is shit on this site.

Its apparent you have issues with your cable connection & im sorry to see this, but that's on you & your ISP.

There's a few things to remember. This site and speed tests are absolutely free. The info you find here is also free. The assistance you are provided is FREE. So do us all a favor and tone down that bullshit negativity towards @CA3LE and this site we have all been members of for over a decade+. If you feel you are the end all be all of knowledge in computers and networking, than figure it out, or switch ISPs to verify your problem with Spectrum cable. Otherwise, keep using other sites like ookla (speedtest.net) that throw overhead in, to bloat the results & make the end user feel better about their max connection speeds, rather than real life performance.

- CA3LE

LEFTY

- Members
  - 5

"Bandwidth & server specs are absolutely not in play here. TMN is on a 10 gig backbone."

Says you. The website says there is a 2000Gbps backbone.

So the test servers all have multiple 1Gbps nic's? Or they have 10Gbps nic's?

Each server has multiple 1Gbps connections? Or a 10Gbp connection?

The TestMy network has a total capacity of over 2000Gbps and our servers have multiple gigabit uplinks into that network. TestMy is always overstocked with bandwidth and can meet the needs of even the most demanding connections. Our servers are also configured and tested to maintain full quality of service for thousands of miles.

We have multi-homed connectivity and bandwidth from over 25 independent Tier 1 carriers including Comcast, Cox, Time Warner, Charter, Qwest, Google, Level 3, Internap, NTT America, Equinix & Telefónica to name a few.

Per the example, if the test site my buddy used gives the same result as TMN, how can it be hot garbage? Not logical.

I know that you are invested and defensive, but I am just trying to cut through all the crap in this business and pay for only what I get.

It was the Admin who bragged he could solve my problems if I only ran these tests, and then these, and then these, and then in the end ust be happy with that you have.

I never projected expertise just long experience, but I was expecting to benefit from the expertise that was projected here.

Suggesting I change ISP's is just disingenuous.

CA3LE

-
- Administrator
- Admin
  - 9.9k
- Location: 74 68 65 20 6D 61 74 72 69 78

Lefty said:
You originally came off to me as a guy who knew a lot and has been doing this a long time.
There is a lot of big talk, hubris, and bragging by the author of this website.
All I have discovered with your site is what is leading me to question the bandwidth and rigor at your test servers.
I love when I spend hours upon hours helping someone, reading into all their tech support emails, taking hours to work someone else's problem in my head, explaining things in intricate detail, writing custom guides specifically for that person and taking time out of my family holiday weekend to quickly respond back... only to be attacked.
Talk about biting the hand that feeds you.
I understand your frustration and I've been trying to help.
It's pretty common that people attack and blame me and my site, I'm used to it by now.
Quote

(from Lefty's email)

1. How is it that you can have a 2000Gbps backbone, as you say on your website?

2. How many IXP's are you connected to?

3. Aren't most of the 43 or so US IXP's limited to a 100Gbps backbone?

4. How can you afford all this bandwidth? I do see some ads when I turn off blockers.

5. I now have test data from six of my computers, with up/down, multithread on/off, to three test servers, how do I summarize this to present to Spectrum? Spreadsheets are too complex.

6. What are the reasons for such a wide variance between multithread on and multithread off?

7. Why do I have to turn off Privacy Badger in Firefox and Brave Shield in Brave to get your tests to work?

Here's what I actually say on the website right now,

- Total network bandwidth capacity in excess of 2000 Gbps
- TestMy.net's servers are all gigabit or multi-gigabit uplinked
- Hosted network features multi-homed connectivity with bandwidth from independent Tier 1 carriers, combining multiple 10 Gbps connections to create one of the industry's fastest networks.
- Global network reach utilizing over 25 Tier 1 network providers including Comcast, Cox, Time Warner, Charter, Qwest, Google, Level 3, Internap, NTT America, Equinix & Telefónica to name a few
- Extensive peering relationships across North America, Europe and Asia

That was actually written so long ago, needs to be updated and includes much more currently. After I get the beta released I'll probably start updating text across the site.

Total network capacity. This is the network capacity of the hosts I choose. I choose hosts who peer well with other hosts and have in many cases direct connections to the larger ISPs. Those are their peering relationships.

How can you afford all this bandwidth? I do see some ads when I turn off blockers.

I've definitely had to be creative in the past to afford to run this site. From 1999 to 2001 I had to shut down because I exhausted all of my options. And then lost all the code. Long story about how it was able to come back.

TestMy.net today I have a cabinet of servers at Colohouse (formerly Data102) about 15 minutes from my house in Downtown Colorado Springs CO. This is where the (currently) centralized databases run. When you visit "testmy.net" it's served from Cloudflare CDN and goes to my rack here in Colorado. When you use the Colorado test server, you're hitting a VPS[20] running in that rack. My cabinet is located only about 10 feet from where all of the connections come into the data center. When I first joined Data102 the owners were fans of TMN, "We use it all the time! It's our go-to test." and so they gave me a favorable deal and placement in their datacenter. But it's still very expensive and I pay for that out of pocket.

Then I have about 30-60 VPS servers at any time, the majority of which right now are on Vultr VPS. If you want $100 of credit to try their platform, here's the link. I get $35 if you keep them.

I scale the VPS servers up and down with demand. That's also expensive but I've paid much more in the past.

I could definitely do it all for much less but the quality of the bandwidth is extremely important to me. There are a lot of people who've come to rely on my service and I do my best to provide them with the best possible scenario from a server-side perspective. I do extensive testing on hosts... xs1 just helped me throw out a promising prospect. It looked fairly good but TestMy.net proved it's not as good as Vultr. So when the client is fast enough, TMN can work in reverse and be a test of the host it's running on. And I intend on doing an entire section where I test VPS hosts like this.

So many people blocking ads. But oh well.

I now have test data from six of my computers, with up/down, multithread on/off, to three test servers, how do I summarize this to present to Spectrum? Spreadsheets are too complex.

[20] *Virtual Private Server*

When you have some computers pulling 250 Mbps in the linear test and others pulling 40 Mbps it's showing me that it might not be Spectrum at fault. Are they delivering your 1000 Mbps... no, but I'm trying to tell you that 250 Mbps isn't all that bad. In multithread it looks like you're able to see 400-600 Mbps. Not bad. If they're cool they should give you a credit for that. Maybe $10-$20/month off for a year or something like that. Comcast did that for me when I presented my information. I just called and told them what I was finding, didn't have to show them anything. They challenged nothing, but each ISP is different.

I've been a trusted resource going on decades now, your ISP knows TestMy.net. They used to train their employees to use my site.

What are the reasons for such a wide variance between multithread on and multithread off?

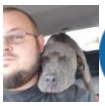
- If it were happening on all of your computers across your network and also happening when directly connected to the modem. Then it's probably a Spectrum issue.
- If it's happening, isolated to one or two machines... most likely a software or configuration issue of some kind.

Why do I have to turn off Privacy Badger in Firefox and Brave Shield in Brave to get your tests to work?

I test in Brave regularly, always with shields up. You must have "block scripts" checked in the advanced settings or something. If you block scripts here nothing will work right because all of the frontend code is javascript. I don't know about Privacy Badger, probably the same kind of issue.

I'm getting back to writing my beta, where my time and effort is more appreciated. Later! << note: the thumb sticking out

xs1

- 
- Moderators
- Staff
  - 4.8k
- Location: D- Mbps 919.48 / U- Mbps 942.24

Lefty said:
Per the example, if the test site my buddy used gives the same result as TMN, how can it be hot garbage? Not logical.
I know that you are invested and defensive, but I am just trying to cut through all the crap in this business and pay for only what I get.
It was the Admin who bragged he could solve my problems if I only ran these tests, and then these, and then these, and then in the end ust be happy with that you have.
I never projected expertise just long experience, but I was expecting to benefit from the expertise that was projected here.
Suggesting I change ISP's is just disingenuous.

Not logical? Lol. It's called consistency. 250mbs is not that hard to attain... But when I do two back-to-back tests one giving me 700 Mbps a second and the other giving me 200 Mbps... That's called garbage. Sorry.

Also suggesting changing isps is not disingenuous.. you were the one that says it's a Spectrum problem. If you've exhausted all possibilities, change ISPs. It's process, not smoke. I pay $75 a month for symmetrical gigabit connection. You state you're paying $100 for cable.... Sounds to me like you should explore your options and see if your speeds get better elsewhere. Take it how you will.

LEFTY

- Members
  - 5

I have never been unappreciative of your efforts or your service.
If I come off that way, it is only out frustration from this year's long battle with Spectrum and my unrealistic expectations of TMN as my last best hope.
So thank you for what you do.
Am still willing to test your beta.

LEFTY

- Members
  - 6

https://ilsr.org/report-most-americans-have-no-real-choice-in-internet-providers/

This includes me.

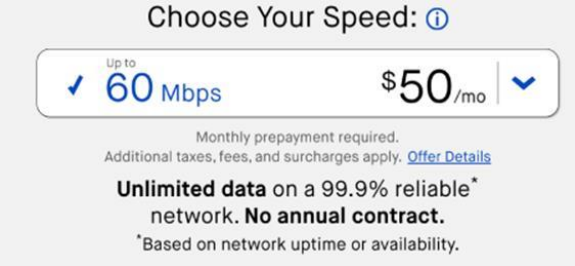
CA3LE

- Administrator
- Admin
  - 9.9k
- Location: 74 68 65 20 6D 61 74 72 69 78

Lefty said:
This includes me.

Includes most people. Includes me as well.

Pulled up CenturyLink (really the only other ISP in the area) to my address and here's what I can get.



lol. Wow! You'll even give me unlimited data!

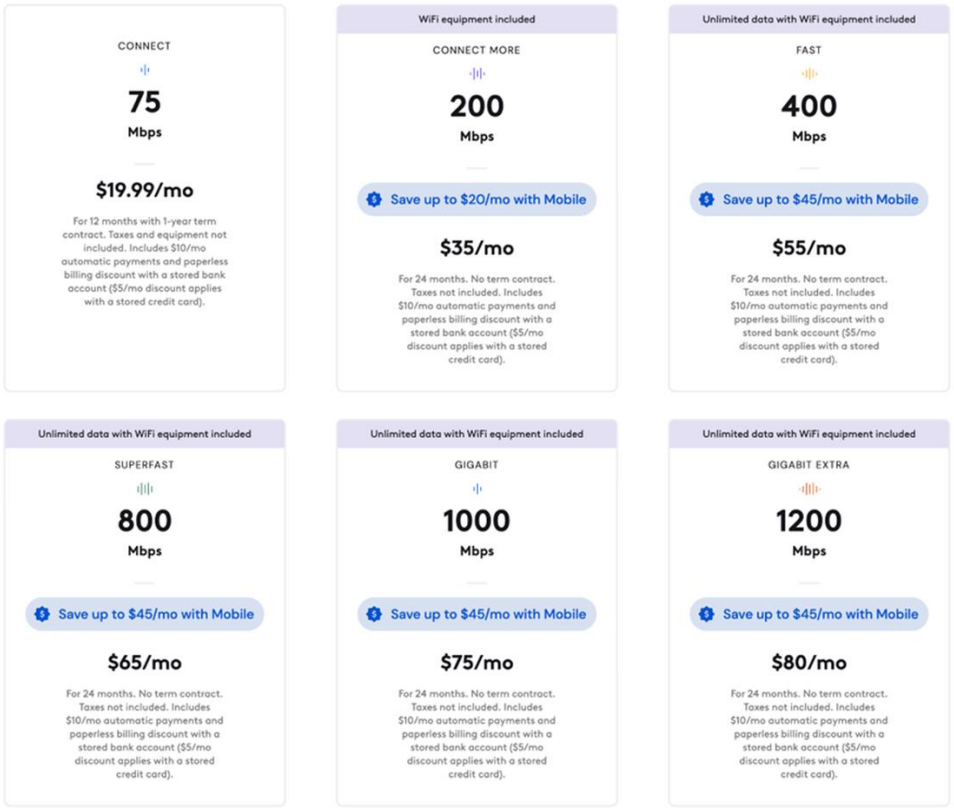
You may want to say monopoly. But it comes down to the infrastructure. Cable laid the infrastructure with superior technology far earlier than telco companies. Coaxial cable even in it's early stages has always been amazing. It was immediately ready for high speed internet before it was even a thing. The architecture of cable systems beat twisted pair, they laid more infrastructure easier. They won for good reason.

It may be a monopoly that they don't have competition at the ground level. They may just buy up anyone who tries to compete. But really as a company today, are you going to come into a rural area and fiber up everything? Probably not... but cable had laid the infrastructure early, in the analog days when hardwired made even more sense. Today, they're going to want to beam you the connection.

If I have the choice between wireless, old crappy telco tech and cable... I'll always choose cable. That's why my nick is CA3LE.

Hell, I'd love me some fiber, just have never had those choice. If I still lived in Phoenix I'd have a bunch of choices these days.

So my options are 60 Mbps for $50 from CenturyLink or from Comcast...



Even if all of those packages perform at 50%... still better than CenturyLink. At least in my area. Now CenturyLink Fiber (FTTH) ... I imagine is a totally different story.

LEFTY

- Members
  - 6

"You may want to say monopoly. But it comes down to the infrastructure. Cable laid the infrastructure with superior technology far earlier than telco companies. Coaxial cable even in it's early stages has always been amazing. It was immediately ready for high speed internet before it was even a thing. The architecture of cable systems beat twisted pair, they laid more infrastructure easier. They won for good reason. "

They simply leveraged existed TV cable lines and exclusive local government contracts. They got bills passed to ban competition from local governments, and nonprofits, they lie about coverage areas and service provided to discourage competition. They are no less evil than the telecom companies, who have squandered more than 400 billion of public money (corporate welfare) in the last few decades.
AT$T publicly said that their money, ill-gotten gains, is better spent on shareholder dividends, and CEO compensation, than investment in fiber for rural broadband.

"If I still lived in Phoenix I'd have a bunch of choices these days."

Well I know you would have at least two. Burn to death from climate change or get out of town.

LEFTY

- Members
  - 7

Problem with the CO test sever or Spectrum?

Time -5	Speed	Provider	Size	ConnectID		TestID
7/7/23 7:34:09 am	37.15 Mbps 4.64 MB/s	Spectrum	200 MB	658642493668	US	tpfEX4vcJ
7/7/23 6:33:22 am	37.41 Mbps 4.68 MB/s	Spectrum	200 MB	658642493668	US	eA4Flab_B
7/7/23 5:32:35 am	37.23 Mbps 4.65 MB/s	Spectrum	200 MB	658642493668	US	pYzWLa5k9
7/7/23 4:31:48 am	31.46 Mbps 3.93 MB/s	Spectrum	200 MB	658642493668	US	13OGBMcgE
7/7/23 3:30:53 am	31.39 Mbps 3.92 MB/s	Spectrum	200 MB	658642493668	US	aXVrUqCTU
7/7/23 2:29:57 am	93.03 Mbps 11.63 MB/s	Spectrum	200 MB	658642493668	US	B6WrhRSM1
7/7/23 1:29:38 am	86.03 Mbps 10.75 MB/s	Spectrum	200 MB	658642493668	US	zD37KOkus

<iframe loading="lazy" src="https://testmy.net/stats/?t=u&d=07-07-2023&l=25&z=26&q=&f=1" scrolling="yes" frameborder="0" height="445" width="100%"></iframe>?t=u&d=07-07-2023&l=25&z=26&q='s Speed Test Results

It's not the computer (Samsung tablet) as it will do fine to the Spectrum speedtest beauty sites.

CA3LE

- Administrator
- ★★ Admin
  - 9.9k
- Location: 74 68 65 20 6D 61 74 72 69 78

other speed test≠ testmy.net
They're testing different and don't look at the result the same way as I do.
You say you're having problems. Why would you trust the other test's results ever after they've shown it working correctly when it obviously isn't?

LEFTY

- Members
  - 9

"Why would you trust the other test's results ever after they've shown it working correctly when it obviously isn't? "

To prove to you and others that it is not my computers or router.

CA3LE

-
- Administrator
- Admin
    - 9.9k
- Location: 74 68 65 20 6D 61 74 72 69 78

LEFTY said:

To prove to you and others that it is not my computers or router.

It doesn't prove anything if the test is only capable of seeing things through a distorted lens.
It can be a bunch of different issues that we've proven over and over are not detectable with other speed tests.
Something is preventing you from scoring well, it's not TMN and I don't really think it's Spectrum. It appears to be a localized issue. Sorry that's not what you want to hear.
Your speed improved when you booted the fresh win11 install, right? I think something you have installed or some setting is messing things up.

LEFTY

-
- Members
    - 10

"*Your speed improved when you booted the fresh win11 install, right? I think something you have installed or some setting is messing things up. "*

I can get 200 from a computer that just got 40 as well. I can get 200 or 90 and then 40 an hour later. A one-time snapshot doesn't prove anything.

For you be right about this, this *_potential problem setting_* would have to be present in different OS's, different form factors, and different software loads across all ten of my computers.

I am sorry but that is just not believable or logical in any way. The only common dominator is the router (already proven good) or Spectrum.

CA3LE

-
- Administrator
- Admin
  - 9.9k
- Location: 74 68 65 20 6D 61 74 72 69 78

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LEFTY

-
- Members
  - 14

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CA3LE

-
- Administrator
- Admin
  - 9.9k
- Location: 74 68 65 20 6D 61 74 72 69 78

I agree, if it's across so many devices you should look to the common denominator.

This is why I suggested that you test directly wired to the modem. You said you already did this but when? How were you testing?

If you can show the ~40 Mbps linear result on a computer with a fresh OS install, directly connected to the modem it will reasonably prove that something is either wrong with the modem, connection to the modem (cable or adapter) or Spectrum.

We have to eliminate all those variables, have you tried that combination yet?

LEFTY said:

I can get 200 from a computer that just got 40 as well. I can get 200 or 90 and then 40 an hour later. **A one-time snapshot doesn't prove anything.**

You may be able to get 200 on one that drops down to 40... **but** did you ever get 40 on the fresh install (win11)? From what I saw, it looked like that machine never showed a drop like the others.

LEFTY

-
- Members
  - 14

I have a 400 page, 100k word, book of this three year saga, if you care to read it for all the gory details.

I have had about six different modems here, multiple versions of Ubee, Technicolor, Sercomm, and the Hitron EN2251 with 2.5G Ethernet port which I have now.

I was testing earlier today (ident 03) with the Surface4 and Edge and was getting around 30 linear. I was also getting poor results with speedtest.exe.

So I fired up Firebox and my linear tests to Dallas went from 30 to 230. (ident 04) No reboot, no changes, no nothing. Just a different browser.

How do you explain this?

There are still way too many variables here! I don't recall testing from the modem to TMN but too many, many, places. Enough to convince even Spectrum that my router was fine.

It is a real hassle to shut down my network connections and try to get these machines over to the modem. So I don't do it unless I am really sure that I need to .

I will try to dig up my modem testing data, and will post it here later. **Meanwhile if you could answer my burning question.**

LEFTY

-
- Members
  - 14

From the modem directly March 8 and 9, 2023 using two different computers, a MS Surface tablet and an Intel NUC .

One of the problems here is that I can't shut my network down for ten days to really test this idea.

This was what was behind me getting Spectrum to give me a SamKnows box, but typically they corrupted this idea and can't really use it to do my own testing.

Note: Please Keep In Mind That These Tests Are A Onetime Snapshot Of Data And Do Not Necessarily Explain The Random Low Bandwidth Messages I Get From Youtube, Prime Video Or Netflix.

Ipconfig Ethernet adapter:

Connection-specific DNS Suffix. : eau.wi.charter.com

Description . . . . . : Surface Ethernet Adapter 1 gigabit Ethernet over CAT 7 cables

Physical Address. . . . . : B8-31-B5-46-20-46

DHCP Enabled. . . . . : Yes

Autoconfiguration Enabled . . . . : Yes

IPv6 Address. . . . . : 2600:6c44:7022:100:cd49:368b:dc23:8c8e(Preferred)

Lease Obtained. . . . . : Wednesday, March 8, 2023 6:46:21 AM

Lease Expires . . . . . : Wednesday, March 8, 2023 3:50:28 PM

Link-local IPv6 Address . . . . . : fe80::24eb:902d:f8c9:b0be%3(Preferred)

IPv4 Address. . . . . : 71.90.xxx.xxx(Preferred)

Subnet Mask : 255.255.252.0 Lease Obtained : Wednesday, March 8, 2023 6:46:39 AM

Lease Expires . . . . . : Wednesday, March 8, 2023 3:50:46 PM

Default Gateway . . . . . : fe80::201:5cff:fe9e:b246%3 71.90.112.1

DHCP Server . . . . . : 68.114.248.1

DHCPv6 IAID . . . . . : 62402997

DHCPv6 Client DUID. . . . . : 00-01-00-01-2B-48-DC-B4-B8-31-B5-46-20-46

DNS Servers . . . . . : 2607:f428:ffff:ffff::1 2607:f428:ffff:ffff::2

Primary 71.10.216.1 Secondary 71.10.216.2

NetBIOS over Tcpip. . . . . : Enabled

SPEEDTESTS (Speedtest.net)

DOWNLOAD 94.29 Mbps UPLOAD 22.95 Mbps

Ping ms 16 93 25

Wausau Supply Company Schofield, WI

DOWNLOAD 374.09 Mbps UPLOAD Mbps 22.89 Mbps

Ping ms 24 48 34

CyberLynk Network Milwaukee, WI

CyberLynk Network hostingsupport.io

PING 24 ms JITTER 1 ms

DOWNLOAD SPEED 343.8 Mbps UPLOAD SPEED 23.0 Mbps

CyberLynk Network Milwaukee, WI

MLAB https://speed.measurementlab.net/#/

	Test Server	**Chicago, US**
	Download	**56.29 Mb/s**
	Upload	**21.31 Mb/s**
	Latency	**31 ms**
	Retransmission	**0.00%**

FAST.COM

Your Internet speed is 57 **Mbps**

Latency Unloaded **24** ms Loaded **303** ms

Upload Speed **20** Mbps

Client Two Rivers, US 2600:6c44:7022:100:cd49:368b:dc23:8c8e Spectrum

Server(s) Chicago, US | Minneapolis, US

Settings	180MB	40MB

SPECTRUM

https://www.spectrum.com/internet/speed-test
Your speed test has finished. Your ping result is 17. Your jitter result is 4. Your download result is 59.0 Mbps. Your upload result is 22.3 Mbps.

Test results

DOWNLOAD 59.0 Mbps UPLOAD 22.3 Mbps

Spectrum Eau Claire, WI

Ipconfig Ethernet adapter:

Ethernet adapter Local Area Connection:

Connection-specific DNS Suffix . : eau.wi.charter.com

Description : Intel(R) Ethernet Connection I218-V (Data Rate Per Port 1GbE)

Physical Address. . . . . : EC-A8-6B-FD-02-FD

DHCP Enabled. . . . . : Yes

Autoconfiguration Enabled . . . . : Yes

IPv4 Address. . . . . : 23.87.28.17(Preferred)

Subnet Mask . . . . . : 255.255.255.0

Lease Obtained. . . . . : Wednesday, March 08, 2023 11:58:24 AM

Lease Expires . . . . . : Wednesday, March 08, 2023 12:58:23 PM

Default Gateway . . . . . : 23.87.28.1

DHCP Server . . . . . : 68.114.248.1

DNS Servers . . . . . : 71.10.216.1 71.10.216.2

NetBIOS over Tcpip. . . . . : Enabled

SPEED TESTS CONDUCTED 3/8/23 12PM

SPEEDTEST.NET

Wausau Supply Company Schofield, WI

Download Mbps 309.34

Upload Mbps 22.82

CyberLynk Network Milwaukee, WI

(this is where by webserver and email server are hosted)

Download Mbps 211.36

Upload Mbps 22.83

CYBERLYNK SITE

CyberLynk Network Milwaukee, WI

Test results

Ping 21ms **Jitter** 1ms

Download Speed 290.4 Mbps

Upload Speed 22.7 Mbps

Spectrum 23.87.28.17

https://www.hostingsupport.io/

FAST

https://fast.com/

Down load Speed 230 Mbps

Latency

Unloaded 44 ms

Loaded 47 ms

Upload Speed 23 Mbps

Client Tworivers, US 2002:1757:1c11::1757:1c11 Spectrum

Server(s) Chicago, US | Ashburn, US

Settings DL 250MB UPL 20MB

SPECTRUM

https://www.spectrum.com/internet/speed-test

Download 287.8 Mbps

Upload 22.5 Mbps

Spectrum Livonia, MI

MLAB https://speed.measurementlab.net/#/

Test Server Chicago, US

Download 46.40 Mb/s

Upload 19.68 Mb/s

Latency 38 ms

Retransmission 0.00%

GOOGLE

https://fiber.google.com/speedtest/

Schofield, WI

Test results

Ping 14 ms Jitter 4 ms

Download 248.9 Mbps

Upload 22.8 Mbps

Wausau Supply Company

Schofield, WI Spectrum

23.87.28.17

AMAZON https://testmy.net/hoststats/amazoncom

:::.. Internet Speed Test Result Details ..:::

Download Connection Speed:: 216545.3 kbps or **216.5 Mbps**

Download Speed Test Size:: 90.9 MB or 93126 kB or 95361024 bytes

Download Binary File Transfer Speed:: 27068 kB/s or 27.1 MB/s

Upload Connection Speed:: 5045 kbps or **5 Mbps**

Upload Speed Test Size:: 6.1 MB or 6272 kB or 6422528 bytes

Upload Binary File Transfer Speed:: 631 kB/s

Timed:: Download: 3.523 seconds | Upload: 10.184 seconds

Tested At:: https://TestMy.net

Test Time:: 2023-03-08 12:32:43 Local Time

Client Location:: Two Rivers, WI US https://testmy.net/city/two_rivers_wi

Target:: Dallas, TX https://dallas.testmy.net

Validation:: https://testmy.net/db/2xM5pRcu~.BWIEzgXLf

TiP Measurement Summary (Download):: Min 89.99 Mbps | Middle Avg 315.59 Mbps | Max 744.15 Mbps | 157% Variance

Client Stats:: https://testmy.net/compID/16970773019802

User Agent:: Mozilla/5.0 (Windows NT 6.1; Win64; x64; rv:109.0) Gecko/20100101 Firefox/110.0 [!]

XFINITY

https://speedtest.xfinity.com/

Down 170.7

Up 10.9

SPEAKEASY

https://www.speakeasy.net/speedtest/

Schofield, WI

Test results

Ping 13 ms Jitter 2 ms

Download 480.6 Mbps

Upload 22.9 Mbps

TESTMYSPEED

https://testmyspeed.onl/

Wausau Supply Company Schofield, WI

Ping 13 ms Jitter 1 ms

Download 456.8 Mbps Upload 22.9 Mbps

C:\windows\Ipconfig

Ethernet adapter Ethernet:

Connection-specific DNS Suffix . : eau.wi.charter.com

Description . . . . . : Surface Ethernet Adapter 1 gigabit Ethernet over CAT 7 cables

Physical Address. . . . . : B8-31-B5-46-20-46

DHCP Enabled. . . . . : Yes

Autoconfiguration Enabled . . . . : Yes

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Primary 71.10.216.1

Secondary 71.10.216.2

NetBIOS over Tcpip. . . . . : Enabled

SPEEDTESTS

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DOWNLOAD 374.09 Mbps

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CyberLynk Network Milwaukee, WI

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FAST.COM

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Client Two Rivers, US 2600:6c44:7022:100:cd49:368b:dc23:8c8e Spectrum

Server(s) Chicago, US | Minneapolis, US

Settings	180MB	40MB

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https://www.spectrum.com/internet/speed-test
Your speed test has finished. Your ping result is 17. Your jitter result is 4. Your download result is 59.0 Mbps. Your upload result is 22.3 Mbps.

Test results

DOWNLOAD 59.0 Mbps

UPLOAD 22.3 Mbps

Spectrum Eau Claire, WI

LEFTY

-
- Members
  - 14

Btw, what is the https://testmy.net/hoststats/amazoncom site that I tested to above?

> Radio silence after my message calling his testing system into question.
> So I guess that this is all there is to that.
> But I sent an email to him anyway.

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Monday, July 10, 2023 11:16 AM
To: 'Admin <admin@testmy.net>
Subject: RE: Questions

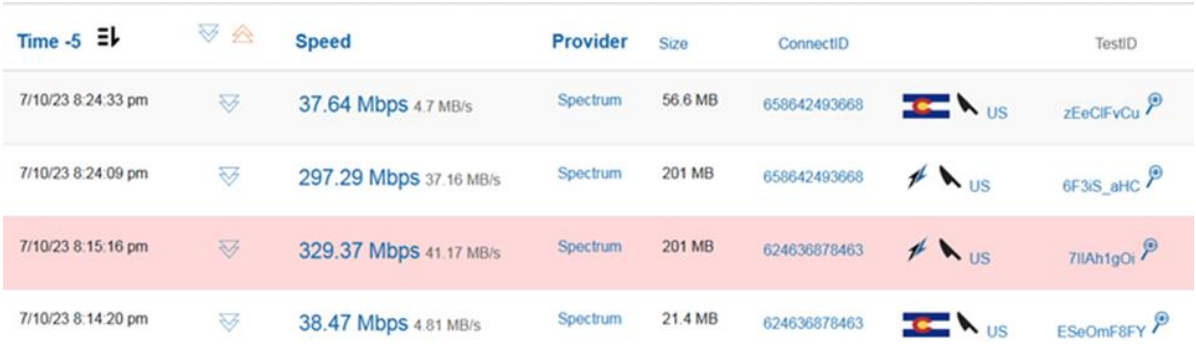
Admin,
You haven't responded for several days to my concerns about my results pertaining to your site's testing methodology, so I am pursuing another course:
https://www.samknows.com/blog/testing-principles

I would still be interested in hearing your reaction to my burning question.
Lefty

LEFTY

-
  - Members 15

So here we have tests from 7/10 my router and my modem both showing the same approximate results. 40ish from the router and the modem with a linear test. 300ish from the router and the modem with the multithreaded test to testmy.net from my Intel NUC.



Time -5	Speed	Provider	Size	ConnectID		TestID
7/10/23 8:24:33 pm	37.64 Mbps 4.7 MB/s	Spectrum	56.6 MB	658642493668	US	zEeClFvCu
7/10/23 8:24:09 pm	297.29 Mbps 37.16 MB/s	Spectrum	201 MB	658642493668	US	6F3iS_aHC
7/10/23 8:15:16 pm	329.37 Mbps 41.17 MB/s	Spectrum	201 MB	624636878463	US	7IlAh1gOi
7/10/23 8:14:20 pm	38.47 Mbps 4.81 MB/s	Spectrum	21.4 MB	624636878463	US	ESeOmF8FY

CA3LE

- Administrator
- Admin
  - 9.9k
- Location: 74 68 65 20 6D 61 74 72 69 78

Sorry I dropped off, like I said, was getting back to writing the beta. It's taken on a life of its own, controlling me into building more. In a good way. Never enough hours though.

If I think of anything that might help more I'll update this thread. Please let us know if you figure out anything solid on your end.

LEFTY

- Members 16

Thoughts on my different results from same machine with different browsers, in my previous posts?

CA3LE

- Administrator
- Admin
  - 10k
- Location: 74 68 65 20 6D 61 74 72 69 78

On 7/7/2023, LEFTY said:

So I fired up Firebox and my linear tests to Dallas went from 30 to 230. (ident 04) No reboot, no changes, no nothing. Just a different browser.

How do you explain this?

There are still way too many variables here!

Meanwhile if you could answer my burning question.

Hi Lefty, after my last response I got back into development again. I hope it all makes sense when you see the beta. Very proud of how it's turning out.

I didn't notice this post until just now... when catching up on the topic I was focused on the post after the one I quote here.

When that happens, where one browser is much faster than another on the same machine, it always points to software as the culprit. There's no other reason why that would happen.

I would reset that browser to factory defaults to see if it improves. But first...

Often it can be some plugin you've installed. You can try systematically disabling them to find the culprit. I would disable all of them first, if speed improves THEN disable them one at a time until you find it.

Routinely installed software could have added the plugin/extension. Or maybe a plugin you've personally installed, may have even ran fine until an update.

A plugin that has the ability to parse the HTML content of the pages you're using, like a deal finder or ad blocker can severely cripple your browser's performance. Especially if the author of the software is doing something nefarious. Which at least to some degree pretty much all of them are. (At least anonymizing your data and sharing it with third parties.)

TestMy.net's Linear test is able to detect this when other's aren't because the data is streaming. It's like you're reading a document from top to bottom. You can't split the data as it's flowing to hide what's really happening. If something is parsing the data as I'm sending it to you it's possibly going to slow down my transmission to you.

The plugin may be harmless and just not a very optimal program. Or it may be parsing your data for evil.

If the plugin is parsing for a few keywords it might not be noticeable but depending on what it's trying to accomplish and how in depth it's parsing it might really slow things down. You may not even notice in normal browsing with fast enough internet... but TMN will notice.

Only way I'd ever ad block is with DNS, only way I'll look for deals is with good old research. NEVER EVER EVER EVER install ANY browser plugins, EVER. There is no exception. If you absolutely need a plugin to do something legit (like metamask) then virtualize a separate desktop or have a specific browser just for that task. If something needs a plugin, you're most certainly giving it too many permissions. I trust no plugin. I could audit their code today and they update it all tomorrow.

Hey, maybe it's something else. I'm literally 1000 miles away.

Back to reset that browser to factory defaults; It could be a simple setting in the browser. Might be buried deep in advanced settings where it could be nearly impossible to find. If all else fails, just reset the browser. All browsers these days seem to have some option for that.

If it is a specific plugin or piece of software and you narrow it down, please let us know what you find. The examples I gave above are real, from many TMN members in the past who've had similar issues and reported back their findings.

Just remember, it's not happening for no reason at all. TMN doesn't lie.

I started writing more here and then started another topic.

LEFTY

-
- Members
  - 17

Sorry to burst your bubble, but I was using the wife's Win10 Surface tablet, to introduce a new player into the testing, hence the use of the evil Edge.

She only streams Netflix and Prime with it, and then only occasionally as she is a bit of an analog girl. <g>.

No extensions of any kind on either browser. This is simply the Gecko engine versus the Chromium engine. Edge and Chrome are supposed to be the fastest rendering engines.

I would hope that your beta will factor this type of problem out.

It makes me wonder that if everyone has to adapt their computers and software to get consistent test results on his site, then what the hell good is it?

The old saying is that “it’s always the clubs and never the golfer”.

Maybe what you should do is put a **System Requirements** section at the top of your website listing how all the planets need to be aligned for your system to give accurate and repeatable test results:

Make and Model of device(s)
OS version(s)
Browser version(s)
Application software allowed, AV, firewall, etc.
Any memory requirements, etc.

CA3LE

-
- Administrator
-
  - 10k
- Location: 74 68 65 20 6D 61 74 72 69 78

Both engines are proven to perform well on TestMy.net. As long as they're running correctly. I run them both regularly, every day. On different operating systems, different machines all over the place. I never see what you're seeing unless there's good reason.

Seems like you're always ready to attack me. If you don't like my test, my results or the advice I'm giving then why are you here?

On 7/21/2023 at 1:13 PM, LEFTY said:

Sorry to burst your bubble

Don't worry, you didn't burst anything. I realized before this even became TestMy.net over 20 years ago... I'm never going to please everyone.

Obviously you can't be helped, you may not even know how to accept help. When people take a lot of time to help you, you spit on their advice.

If I wanted spit in my life I'd work in a prison, zoo or insane asylum.

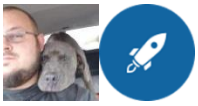
Some people act like I owe them something. This site is given to you AS-IS, take it or leave it. If it works for millions of other people for over 20 years... but doesn't work for you then you should probably wonder what's different about your setup than everyone else. Instead you join the camp of those who shoot the messenger.

The other people here testing with similar Chrome setups but getting much better results prove that the issues are unique to you. But you want the problem to be someone else.

Your wife probably clicked something and got the device infected, being an analog girl and all. It could infect the base OS browser but not other installed browsers. I would't ignore those results, they only happen for good reason. When I've played with surface tablets in the past, I've been blown away how well they perform on TMN. Using Edge.

Edge ≠ Internet Explorer. For the most part it performs as well or even better than Chrome in my testing. I no longer have to program specifically for Microsoft's browser, as it now respects the standards. Any browser that accepts the standard will perform well on TMN, which (after Edge switching to Chromium) is every-single major browser.

xs1

- 
- Moderators
- Staff
  - 4.8k
- Location: D- Mbps 2276.08 / U- Mbps 2373.43

CA3LE said:

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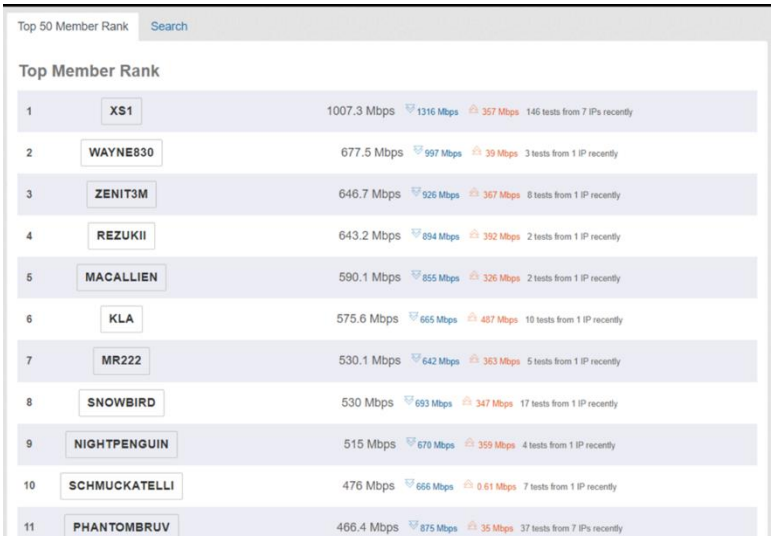
Seems like you're always ready to attack me. If you don't like my test, my results or the advice I'm giving then why are you here?

Expand

well said.



idk. TMN seems to work ok for me.. upload we will sort out in the new revision im sure.

Keep up the hard work D!

- CA3LE

LEFTY

-
- Members
  - 18

"Your wife probably clicked something and got the device infected, being an analog girl and all. "

Sorry again, but this is why she doesn't have an Admin account. Running out of excuses yet?

The Mod, who I was not talking to said, *"Seems like you're always ready to attack me. "*

Simply pointing out that this system testing is inconsistent across browsers is not an _*attack*_. This is more what an attack would look like:

It makes me wonder that if everyone has to adapt their computers and software to get consistent test results on his site, then what the hell good is it?

The old saying is that “it’s always the clubs and never the golfer”.

Maybe what you should do is put a System Requirements section at the top of your website listing how all the planets need to be aligned for your system to give accurate and repeatable test results:

Make and Model of device(s)

OS version(s)

Browser version(s)

Application software allowed, AV, firewall, etc.

Any memory requirements, etc.

- CA3LE
-
- Administrator
- Admin
  - 10k
- Location: 74 68 65 20 6D 61 74 72 69 78

You can use any OS, any browser, A/V, firewall etc.

Usually any computer that has a fresh install will perform well. It's only after introducing variables that limit or get in the way of the connection that there are ever issues. I have dozens of programs installed on my computers and none of them get in the way of my normal transfer, ever. Nor do I ever encounter programs or settings that affect my TMN results, ever.

There are no special requirements. If you run the test on a memory constrained machine, a machine with something misconfigured or with software parsing your browser data... then yes, you're results will suffer. That's why we test!! But that doesn't mean you have to make stars align. Just if you start with crap you'll usually end up with crap results. If the conditions improve TMN results always improve.

Now, we know that tablet isn't crap so there must be some kind of crap causing it to look like crap.

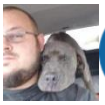
LEFTY said:

The Mod, who I was not talking to said, *"Seems like you're always ready to attack me. "*

... what? Dude, I'm the Webmaster and clearly you were writing to me. If you're writing TestMy.net, you're writing me. I am TestMy.net.

Back to my post from Friday, have you tried resetting Edge to default?⋯ >> Settings >> Reset Settings >> Restore settings to their default values

TestMy.net is only trying to help you by showing you what it sees. If two browsers on the same machine are performing 10X different, there's good reason you're getting those results. It doesn't just happen.

- xs1
- 
- Moderators
- Staff
  - 4.8k
- Location: D- Mbps 2276.08 / U- Mbps 2373.43

LEFTY said:

Simply pointing out that this system testing is inconsistent across browsers is not an _attack_. This is more what an attack would look like:

It makes me wonder that if everyone has to adapt their computers and software to get consistent test results on his site, then what the hell good is it?
The old saying is that "*it's always the clubs and never the golfer*".
Maybe what you should do is put a System Requirements section at the top of your website listing how all the planets need to be aligned for your system to give accurate and repeatable test results:
Make and Model of device(s)
OS version(s)
Browser version(s)
Application software allowed, AV, firewall, etc.
Any memory requirements, etc.
Expand

Than why are we still here trying to prove an inaccurate point? If testmy.net is to blame, than blame it and move on. You obviously do not want the assistance being provided to you, so....??? Instead you want to continue to challenge Damon conveying that your systems are flawless and blame is "obviously" on testmy's side. So be it! 😄

- LEFTY
-
- Members
  - 19

I just today installed Linux Mint 21.2 Victoria Cinnamon Edition on a brand new system.

One time linear test results continue to be low and inconsistent. I don't have time to do long term testing right now.

I keep trying because I am looking for a good test methodology. I am hopelessly looking to prove to myself that I actually have the 1000Mbps that I am paying Spectrum for. Saying I should be happy with 400 doesn't help me.

Blaming my, now 11, computers does not move that forward.

Am installing a new Netgear RAXE500 2.5 Gbps router to match my 2.5 Gbps Hitron modem, and a 2.5 Gbps TPLink switch with Cat 8 cables tomorrow and will see what that does.

Note the 638Mbps multithread test as my final test.

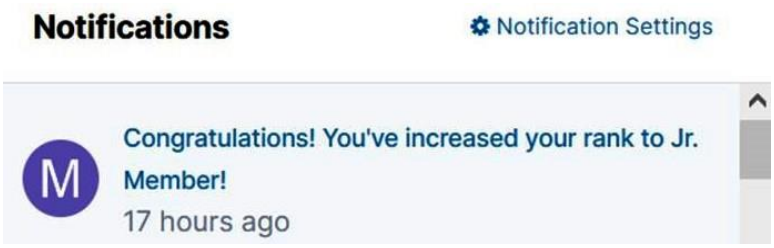
I don't want these posts to be adversarial, so please stop trying to bait me.

Just help me discover why I am getting low and inconsistent test results, if you want.

If not then don't.

Time -5	Speed	Provider	Size	ConnectID		TestID
7/23/23 4:55:55 pm	638.04 Mbps 79.75 MB/s	Spectrum	201 MB	658642493668	US	UCIUCpH44
7/23/23 4:46:56 pm	14.34 Mbps 1.79 MB/s	Spectrum	18.2 MB	658642493668	US	JNwvAcDvB
7/23/23 4:46:41 pm	358.47 Mbps 44.81 MB/s	Spectrum	200 MB	658642493668	US	32AkdWECy
7/23/23 4:46:13 pm	24.34 Mbps 3.04 MB/s	Spectrum	18.9 MB	658642493668	US	MNAiRBM-1
7/23/23 4:46:02 pm	326.58 Mbps 40.82 MB/s	Spectrum	86.3 MB	658642493668	US	PwU4lOCZo
7/23/23 4:44:09 pm	35.48 Mbps 4.44 MB/s	Spectrum	18.5 MB	658642493668	US	rgOoplvDB
7/23/23 4:44:00 pm	403.84 Mbps 50.48 MB/s	Spectrum	200 MB	658642493668	US	Z9u-JoL7-

Then in the midst of all that, I get a promotion.



Reminds me of getting Badges on the Windows Insider Forum a few years back. See my book The Cozening for the details on that horrific experience.

LEFTY

- Members
  - 20

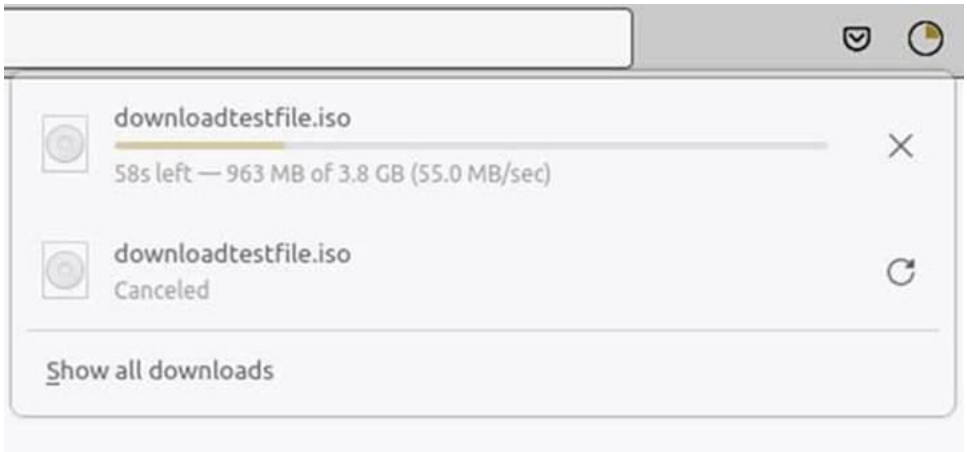
Btw, this is the kind of download result I get EVERYWHERE, http or ftp.

48 Mbps

- LEFTY

- Members
  - 21

No time as of yet to install the new router, however more testing of Linux reveals a dramatic improvement in downloads



440 Mbps

Linux Mint 21.2 Victoria Cinnamon Edition

- mudmanc4
-
- Moderators
- Staff
  - 14.9k
- Location: In The Plex

I've been loosely following this thread. Not read it all. Keeping this in mind.....

Everything Microsoft has very serious fatal issues. I left Windows after they torched NT/ 2k , everything since stinks on ice with a laser show, on the best brand new shiny hardware with the latest in connection technology. Although I am still forced to deal with it.

MS Enterprise is a dumpster fire behind a back water New York City greasy spoon on life support with krok'd out staff.

Now that this is out of the way and likely has nothing to do with the topic .....

No idea if this has been mentioned in this thread so forgive me, if it were me, first thing I might do is remove all possible hops on internal network.

Remove any and all 'other' devices from the local network.

Test different times of the day in that setup.

I would chill, because I have been around the Sun enough times to know the likelihood of my systems achieving what any ISP sells me are slim. And make the best of what I can do with what I have been granted. Paying for or not.

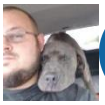
Aside this, if I require a 1 gig service to be 1 gig constantly, then I would get setup with a business account, because I would never fully utilize 1 Gig in my residence unless I was testing for it. Not the way streaming media is setup. Not the way anything residential is setup as far as I am aware.

I might go find a local acquaintance and setup an iPerf server between.

- LEFTY
-
- Members
  - 22

Mudman,
Thanks for the basic tips but I have been at this for three years and am determined to force Spectrum to give me what I am paying for and/or reduce my excessive pricing.
I am testing very clean with only one machine connected at a time.
Three years ago I got an admission that they couldn't do 400 via a price cut.
Now I am trying to get the 500 they promise, by upgrading to 1000. But if I drop back to 500 I will still pay the same.
Spectrum won't do commercial accounts at residential addresses and I don't want to pay that vig anyway.
Re: the dumpster fire:
Linux now seems to be what Windows used to be, although proprietary, a tool to democratize computers for the masses. It did that very well, but now has gone off the rails with monetization. There is not a good future for Windows, in my view.
Having been a 30 year Windows user and beta testing since 90, I know full well about regression. Progress from 3 to 7 and then the functional regression of 8, 10, 11. Next step in 12 will likely be Windows AI SAS (hackable by rogue AI's) and I am not going there.

Btw, if you backup in this thread you will find a funny song I wrote and recorded about hops.

- xs1
- 
- Moderators
- Staff
  - 4.8k
- Location: D- Mbps 2276.08 / U- Mbps 2373.43

On 7/24/2023 at 5:48 PM, mudmanc4 said:

Aside this, if I require a 1 gig service to be 1 gig constantly, then I would get setup with a business account, because I would never fully utilize 1 Gig in my residence unless I was testing for it. Not the way streaming media is setup. Not the way anything residential is setup as far as I am aware.

unless fiber* (which still doesn't guarantee, but gets ya close)

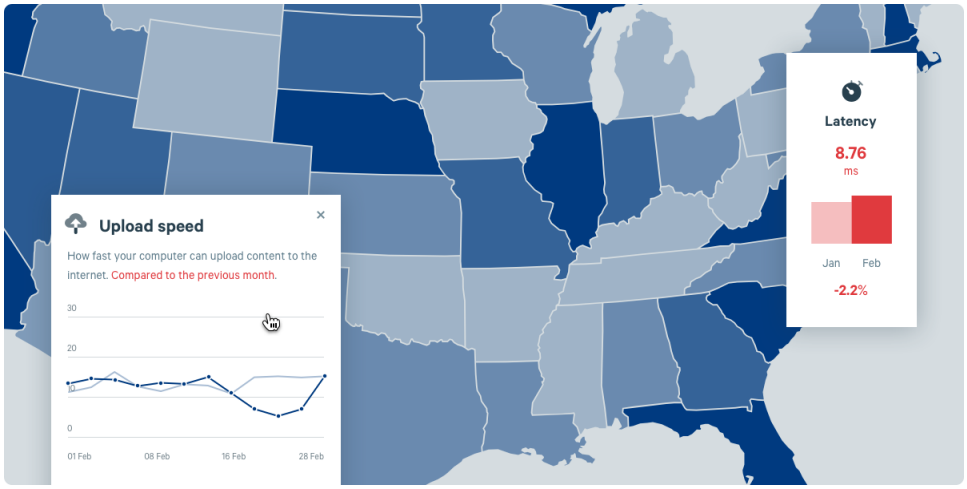
- LEFTY
-
- Members
  -
  - 23

Let me know when Charter starts laying fiber in rural America. Charter will continue to milk the coaxial cow until it is dry. AT&T came right out and said publically that their profits are better spent giving dividends to Wall Street than investing in rural America. Of course they will all say that they are, to get some of the corporate welfare flowing from DC. But those fiber promises are already 25 years old. See the 400 billion dollar broadband scandal book.

Conversations With Internet Speed Researchers

From: Measuring Broadband America [mailto:community@samknows.com]
Sent: Saturday, June 03, 2023 9:04 AM
To: lefty@tcw.org
Subject: Measuring Broadband America - I've signed up for a Whitebox, now what?

Measuring Broadband America



Dear Lefty

First of all, thank you!

Now you have signed up to be part of Measuring Broadband America and receive a Whitebox (part of your Test Kit), we need to check your details against our sample requirements. This might take us time as we have large amounts of people signing up, so don't despair if we don't get back to you immediately.

If you fit the sample plan, you'll get another email from us asking you to confirm your delivery details. Once you've done that, you just need to wait for your Whitebox to arrive.

You'll need to plug it in, so make sure there's space next to your router. Once it's connected then you'll be ready to start collecting data.

For further information about SamKnows and our Test Kit, please take a look at our FAQs.

Kind regards,

SamKnows Team

SamKnows Measuring Broadband America

So between June and July I signed up three times under different email addresses. The first two were for the Canadian program, but who knows. Canadians are supposed to be very nice right?

Your request has been received and is being reviewed by our support staff. June 03, 2023
Your request (60074) has been received and is being reviewed by our support staff. 6/23/23
Your request (60491) has been received and is being reviewed by our support staff. 7/17/23

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Monday, July 17, 2023 5:05 PM
To: community@samknows.com
Subject: Measuring Broadband America

"Now you're on our list, we'll check your details against our sample requirements."

Hello,
Can you provide some clarity to this statement?
Is it geographic, or ISP related, or connection related/
The FAQ IRL, https://support.samknows.one/, throws a 404 error on the page it goes to after the signup.
Ok, wait I found it here:
https://www.measuringbroadbandamerica.com/program-faqs
Thanks,
Lefty

On Sun, Jun 11, 2023 at 3:53 PM Lefty Insider <lefty@tcw.org> wrote:
Wehe, et al,
I am trying to run your Wehe tests on a Windows PC (Prime, YouTube, Netflix) and all I can get is "Results inconclusive, try running the test again".
Are your servers still running?
Thanks,
Lefty

From: Researcher Choffnes [mailto:researcher@ccs.neu.edu]
Sent: Monday, June 12, 2023 1:49 PM
To: Lefty Insider <lefty@tcw.org>
Subject: Re: Is Wehe alive?
Hi Lefty,
Yes, the project is still alive. What client are you using?
Researcher

From: Researcher [mailto:researcher@ccs.neu.edu]
Sent: Thursday, July 06, 2023 9:48 AM
To: Lefty Insider <lefty@tcw.org>
Subject: Re: Is Wehe alive?
Oh, you need to have Java installed (e.g., via https://www.java.com/en/download/help/download_options.html) and then follow the usage instructions here: https://github.com/NEU-SNS/wehe-cmdline#run-the-jar
Researcher

From: Researcher [mailto:researcher@ccs.neu.edu]
Sent: Monday, July 10, 2023 8:00 AM
To: Lefty Insider lefty@tcw.org>
Subject: Re: Can you tell me what I am doing wrong with Wehe?
Hi Lefty,
The line from the "ui_[...].txt" file that says:
RESULT: No differentiation
is the one that indicates no net neutrality violation detected. You can ignore the websocket errors in the logs file. So if all the other tests gave you "no differentiation" then you are in fact all good. This is expected, we haven't seen evidence of throttling on fixed-line connections in the US, just cellular and other long-range wireless (e.g., satellite or point-to-point links).
Best,
Researcher
Associate Professor, Khoury College
Cybersecurity and Privacy Institute, Northeastern University

On Mon, Jul 10, 2023 at 11:16 AM TDI <lefty@tcw.org> wrote:
Researcher,
I guess that I wasn’t clear that I was just looking for your informed opinion, to assist with my resolution of my Charter performance problems.
What I got from you is that there really isn’t a good testing methodology for application performance yet. But stay tuned…
Does the Cisco/SamKnows merger portend good things towards this goal?
I am not a VC and don’t even play one on TV,
Lefty

From: Researcher [mailto:researcher@ccs.neu.edu]
Sent: Monday, July 10, 2023 12:01 PM
To: Lefty Insider <lefty@tcw.org>
Subject: Re: Can you tell me what I am doing wrong?
Hi Lefty,
Speed tests are, believe it or not, an active area of ongoing research. That's part of why you see so much chatter about it in the M-Lab space.
In any case, Wehe tests only for differentiation---whether your provider is slowing down certain applications and not doing so for others. We are not a speed test. So even with a poor quality connection, Wehe may report there is no differentiation---it just means that performance is equally bad for all tests.
I am interested in better tests for application performance that are not just speed tests. However, it's an area of research I have not yet been funded to pursue...
Best,
Researcher

From: Researcher [mailto:researcher@ccs.neu.edu]
Sent: Monday, July 10, 2023 10:00 AM
To: Lefty Insider lefty@tcw.org>
Subject: Re: Can you tell me what I am doing wrong with Wehe?
Hi Lefty,
Oh, I wasn't asking for money :) I apply to the National Science Foundation for funding so your tax dollars already fund my work! The thing is that it's a competitive process and takes time, so I can't jump on everything I want to do whenever I want to.
Yes, you're correct that testing methodologies are quite there yet, but hopefully you'll see improvement in the future.
And I don't know what to say about the Cisco/SamKnows merger. Quite frankly consolidation is usually bad for innovation, so I'm not optimistic. That's where academia (without commercial interests/incentives) can be helpful. Perhaps something like this project would be helpful: https://internetequity.uchicago.edu/about/internet-study/netrics-internet-measurement-dashboard/
Researcher

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Wednesday, July 12, 2023 3:04 PM
To: 'Researcher researcher@ccs.neu.edu
Subject: Or sometimes it could be just about resources and expertise

"Quite frankly consolidation is usually bad for innovation, so I'm not optimistic."

"We believe that in a few years, every internet enabled device will include a measurement agent, collecting data about internet performance. We already have tens of million homes actively testing using our global platform. We expect this number to grow tenfold in the coming years. This month alone we've added almost four million homes and with the performance data we collect, we are building a never-before-seen picture of device, application and network performance. But there is still so much more that could be done.
To achieve our goals we are joining Cisco, the world leader in networking
Specifically, we'll be joining the Cisco ThousandEyes team to integrate our technologies and take ThousandEyes' view of global internet health to the next level. Cisco ThousandEyes empowers leading organizations worldwide to see, understand, and improve connected experiences everywhere, and joining an organization like Cisco will enable us to scale to reach more devices and assure great digital experiences for any user over any network." https://www. Samknows.com
Lefty

From: Researcher [mailto:researcher@ccs.neu.edu]
Sent: Wednesday, July 12, 2023 3:57 PM
To: Lefty Insider <lefty@tcw.org>
Subject: Re: Or sometimes it could be just about resources and expertise
The ThousandEyes team is great, one of my former PhD students is there, and I know many others on the team quite well. So I suppose we can be cautiously optimistic.

From: Lefty Insider [mailto: lefty@tcw.org]
Sent: Wednesday, July 12, 2023 4:08 PM
To: 'Researcher' <researcher@ccs.neu.edu>
Subject: RE: Or sometimes it could be just about resources and expertise
Researcher,
This is the subtitle to the historical novel I am in the process of finishing now:
A tale of unwarranted optimism, unrelenting persistence, computer geek humor, corporate incompetence, and unregulated monopolistic behaviors in a David's fight for his fair share of Megabits from a Cable Internet Goliath.
Lefty ☺

The Trials and Tribulations of a First Time Linux User

Sometime around the year 2000, under considerable pressure from some Computer Geek coworkers, I bought a boxed copy of Red Hat Linux with the intention of installing and playing with it. Shortly after, my business was broken into and that was one of the items that was stolen.

I never looked back or thought about it again really, and went on using XP, Vista, and Win7 to run my businesses and personal life with great success.

About ten years ago during my experience with the Windows 10 Insider program, detailed in great length and excruciating detail the my book The Cozening, I started thinking about Linux again.

So now here it is about ten years later and I am finally taking that plunge. What follows is a short story, I hope, about my first interactions with Linux Mint 21.2 Victoria Cinnamon Edition. Not quite as catchy as the name Windows, huh?

I predict a slow but steady migration away from MS and Apple (people will eventually figure out that they are just lying to everyone about security) as people get fed up with this out of control unbridled and eminent domain style data harvesting, from our computers, phones, security devices, cars and even household appliances, and with this relatively new surveillance capitalism libertarian/authoritarian political system in general.

So is the move to Linux worth the pain? Read on.

Linux Mint Forums

Welcome to the Linux Mint forums! https://forums.linuxmint.com

Installation appears frozen

Forum rules

Before you post please read how to get help. Topics in this forum are automatically closed 6 months after creation.

18 posts • Page **1** of **1**

Lefty

Level 1

Posts: 9

Joined: Sun Jul 23, 2023

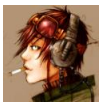
Contact Lefty

Installation appears frozen

• • Post by **Lefty** » Sun Jul 23, 2023

hello,
30 year Windows user, first time Linux installer.
I am installing linuxmint-21.2-cinnamon-64bit.iso on a newly built computer with a 2TB motherboard RAID.
Everything went swimmingly until this point where it has been frozen for a couple of hours.
I say frozen since I don't see progress, however the mouse works, the screen saver comes on, the color

wheel spins, I can move back on the slide show. etc. The hard disks are not making any noises, like they are processing anything.
It did not ask me for a RAID driver like Windows does.
I hate to reset and start over but that is my inclination.
Please help a Newbie!
I would insert screen shots but don't know how on this forum. See next message.
Brand new System is Intel DX79SI, CoreI7 3.3Ghz, 64GB, 8400GS PCI, 512MB video (for now)
Twin 2 TB Seagate Constellation drives in bios RAID, 750 watt PS
Installing from 4GB usb drive boot.
Thanks,
lefty
Last edited by Lefty on Sun Jul 23, 2023, edited 2 times in total.



shedyed

Level 4

Posts: 237
Joined: Wed Feb 03, 2021
Contact shedyed

Re: Installation appears frozen

- Post by **shedyed** » Sun Jul 23, 2023

Here's what to do with those screenshots:
Post them in a popular website e.g. imgur.com
Include those links in your upcoming post.
I'm fairly certain the proper instructions are in the other forum (intro and/or beginner HOWTOs), but this is a quick and easy way to get going.
Not a RAID guy at the moment; just a lurker.

Lefty

Level 1

Posts: 9
Joined: Sun Jul 23, 2023
Contact Lefty

Re: Installation appears frozen

- - Post by **Lefty** » Sun Jul 23, 2023

I did RTFM, the installation instructions. No help.
Screenshots are here:
http://www.tcw.org/Mint Install1.JPG

http://www.tcw.org/Mint Install2.JPG
You will need to copy and paste these links.

rene

Level 20

Posts: 12203
Joined: Sun Mar 27, 2016
Contact rene

Re: Installation appears frozen

- Post by **rene** » Sun Jul 23, 2023

An Intel BIOS (isw) RAID...
Mint since 21 switched to the new Ubuntu installer, and while I had my isw RAID functional with Mint 20 I could not get it to work with the new installer (although I don't recall whether or not I had the same freeze). While an issue if you (aim to) dual-boot Windows, I did and do not, and settled for a Linux mdadm software RAID rather than the BIOS RAID. A HOWTO for setting that up is at viewtopic.php?t=391037.
If you want to you can first try if installing mdadm and/or dmraid onto the installer system prior to starting the installation -- open a terminal and run `sudo apt install mdadm dmraid` -- and seeing if the installer *then* manages, but unless mistaken I in fact tried that. That is, I expect that you won't get Mint 21 installed into that isw RAID. If also not dual-booting the above mdadm software RAID may be an alternative.
It's in any case not useful to wait around anymore. The installer takes somewhere from 10 to 15 minutes and currently just hangs.

Lefty

Level 1

Posts: 9
Joined: Sun Jul 23, 2023
Contact Lefty

Re: Installation appears frozen

- Post by **Lefty** » Sun Jul 23, 2023

Thanks for the response.
I am not dual booting, just trying to install so that I can play with Linux.
Perhaps RAID is the problem since it is hung at creating a file system for RAID.
I really don't like SW RAID, too many pitfalls.
Thanks for the permission to reset, and if it won't then boot into the OS, I will turn off RAID and try, try, again.
You would however think that by version 21.2 this OS would be mature enough to handle RAID.
Oh, well.

rene

Level 20

Posts: 12203
Joined: Sun Mar 27, 2016
Contact rene

Re: Installation appears frozen

- Post by **rene** » Sun Jul 23, 2023

Lefty wrote: ↑Sun Jul 23, 2023 You would however think that by version 21.2 this OS would be mature enough to handle RAID.
At 20.3, it was. Mint bases off of Ubuntu (22.04 for 21) and the new Ubuntu installer is a regression in more ways than one.

Lefty

Level 1

Posts: 9
Joined: Sun Jul 23, 2023

Re: Installation appears frozen

- • Post by **Lefty** » Sun Jul 23, 2023

I think I might had had a HD failure in the process. One drive was missing in the bios when I rebooted. Turned off RAID and it reappeared but then the install failed again with a Volume0:1 error. I may need to replace that drive and try again.
I think I have a lot to learn about Linux drive management, not that I think I should have to. Although I do remember putting drive table numbers in for MFM drives in the DOS days.
having been a Windows user I know full well about regression. Progress from 3 to 7 and then the functional regression of 8, 10, 11. Next step in 12 will likely be Windows AI SAS and I am not going there.

Lefty

Level 1

Posts: 9
Joined: Sun Jul 23, 2023

Re: Installation appears frozen

- • Post by **Lefty** » Sun Jul 23, 2023

Well that was it. Went back to bios RAID with a new hard disk. Happened to have a fresh one here, it sometimes pays to be a Geek.
Yikes, much to learn about this however. Mostly it's intuitive, I missed the right click copy or move command right away. I guess I have to cut and paste to move.
Not sure why I have an install Linux Mint icon on the desktop. Threw me for a bit, but now that I turned auto arrange off, I can just ignore it.
Thanks to those who helped me.
Lefty

AndyMH
Level 20
Posts: 12228
Joined: Fri Mar 04, 2016
Location: Wiltshire
Contact AndyMH

Re: Installation appears frozen

- Post by **AndyMH** » Sun Jul 23, 2023

Lefty wrote: ⇗Sun Jul 23, 2023 Not sure why I have an install LinuxMint icon on the desktop. T
That suggests that you have not installed mint but are still booting from your install stick.
Thinkcentre M720Q - LM21.2 cinnamon, 4 x T430 - LM21.2 cinnamon, Homebrew desktop i5-8400+GTX1080 Cinnamon 19.0

Lefty
Level 1
Posts: 9
Joined: Sun Jul 23, 2023
Contact Lefty

Re: Installation appears frozen

- • Post by **Lefty** » Sun Jul 23, 2023

Well FMe. I did all that configuration without the thumb drive in and though I was on the hard disks.
A simple reboot dashed that notion. So is everything I did lost to the bit bucket?
I guess I should just boot of the thumb drive again and run that icon.

rene
Level 20
Posts: 12203

Joined: Sun Mar 27, 2016

Contact rene

Re: Installation appears frozen

- Post by **rene** » Sun Jul 23, 2023

Lefty wrote: ⤴Sun Jul 23, 2023 so is everything I did lost to the bit bucket?
Would be, yes.

Lefty

Level 1

Posts: 9
Joined: Sun Jul 23, 2023
Contact Lefty

Re: Installation appears frozen

- Post by **Lefty** » Mon Jul 24, 2023

Ok, I did a real install this time. Redid my work, lesson learned, and it is now fine.
I still don't understand drive management. Not sure my RAID is working correctly.
Is there something like a Windows Disk Management utility available?

AndyMH

Level 20

Posts: 12228
Joined: Fri Mar 04, 2016
Location: Wiltshire
Contact AndyMH

Re: Installation appears frozen

- Post by **AndyMH** » Mon Jul 24, 2023

Lefty wrote: ⤴Mon Jul 24, 2023 Is there something like a Windows Disk Management utility available?
gparted, install from software manager.
Thinkcentre M720Q - LM21.2 cinnamon, 4 x T430 - LM21.2 cinnamon, Homebrew desktop i5-8400+GTX1080 Cinnamon 19.0

rene

Level 20

Posts: 12203
Joined: Sun Mar 27, 2016
Contact rene

Re: Installation appears frozen

- Post by **rene** » Mon Jul 24, 2023

The program "Disks" is also somewhat akin -- but I hate its bug-ridden guts.
If you run `mount | grep "on / "` you are shown which device hosts your root filesystem. In the case of a direct SATA drive that would be something like /dev/sda1 -- with an isw BIOS RAID it is or was at least when I still had one /dev/mapper/isw_<some id>. If indeed than you're fine (you can also check the text file /etc/fstab for where your filesystems are mounted from, or trawl through `dmesg | less` or...)

AndyMH

Level 20

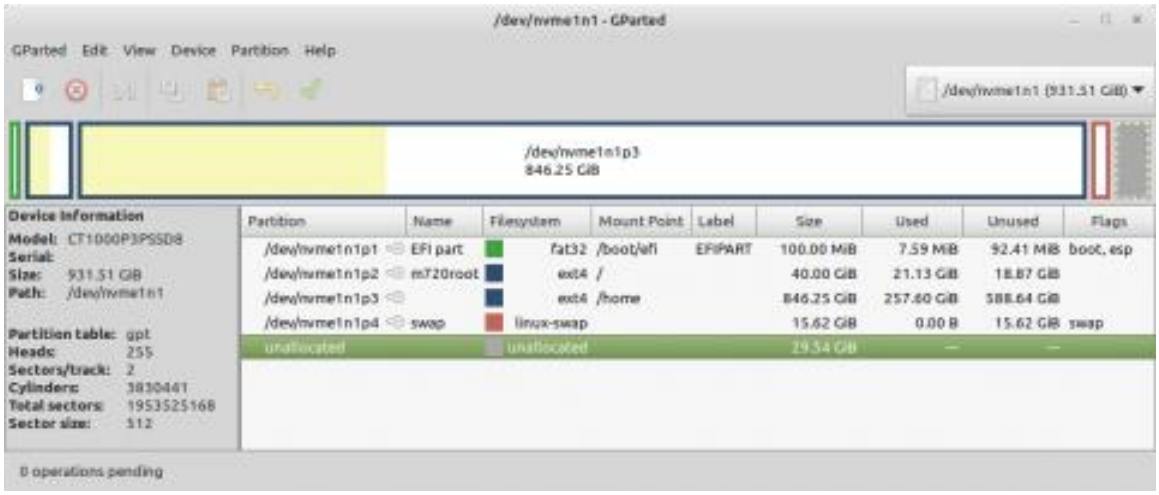
Posts: 12228
Joined: Fri Mar 04, 2016
Location: Wiltshire

Contact AndyMH

Re: Installation appears frozen

- Post by **AndyMH** » Mon Jul 24, 2023

rene wrote: ↑Mon Jul 24, 2023 1:16 pm The program "Disks" is also somewhat akin -- but I hate its bug-ridden guts.
Likewise, which is why I didn't suggest it. gparted on my system drive:



Disks on the same drive:

Thinkcentre M720Q - LM21.2 cinnamon, 4 x T430 - LM21.2 cinnamon, Homebrew desktop i5-8400+GTX1080 Cinnamon 19.0

Lefty

Level 1

Posts: 9
Joined: Sun Jul 23, 2023

Contact Lefty

Re: Installation appears frozen

- • Post by **Lefty** » Mon Jul 24, 2023

So thanks to all for responding.
My first install failed to a bad hard disk I believe, it was an OEM install since I didn't know any better.
The second install I thought was to the hard disk but a reboot confirmed that it was not.
The third install said Mint was already installed and it gave me some options.
I chose to do a side by side so I could boot off either, but that proved to be not true since it just simply boots to Linux now.
The attached may make sense to some of you, but not to me.
What this is supposed to be is a pair of 2TB Seagate drives in a RAID1 mirror.
www.tcw.org/GParted.png
www.tcw.org/GParted-2.png
Remember, be gentle I am a newbie.

rene

Level 20

Posts: 12203
Joined: Sun Mar 27, 2016
Contact rene

Re: Installation appears frozen

- Post by **rene** » Mon Jul 24, 2023

Lefty wrote: ⇗Mon Jul 24, 2023 What this is supposed to be is a pair of 2TB Seagate drives in a RAID1 mirror.
Whatever it is, that it is not. Your second drive /dev/sdb hosts the EFI System partition and two 1TB partitions the latter of which is your current Mint installation. Your first drive /dev/sda seems to just be chilling in a corner doing absolutely nothing of interest.
Your earliest screenshot did show a root filesystem aiming to be created on an isw RAID partition (/dev/mapper/isw_<something>) but those images seem to be gone now. In any case your current root filesystem lives directly on /dev/sdb2.
As originally commented also I could not get an isw BIOS-RAID going with the Mint 21 installer and many/most here will have no experience doing that at all. As such you may want to at least for now give up on the BIOS-RAID if definitively you can't get the installer to honour it, and use software RAID as per linked HOWTO, or just use the two drives *as* two drives (as you are doing now, basically, although you'd have to partition and format /dev/sda and mount it somewhere for it to be useful),

Lefty
Level 1
Posts: 9
Joined: Sun Jul 23, 2023

Re: Installation appears frozen

• Post by **Lefty** » Mon Jul 24, 2023

Well silly me, when I did a Ctrl I to look at the RAID it showed it degraded. After fixing that and setting up the RAID again, it is supposed to finish that in the OS which Windows does, but Mint seems to be unaware of.
So long story short, after four installs and configuring, practice makes perfect they say, I have given up on RAID and will install to one drive and use the other for backup. Snapshot or whatever it's called.
Will drop back in with a note on how this is going...

Installing Mint 21.X on BIOS RAID already created

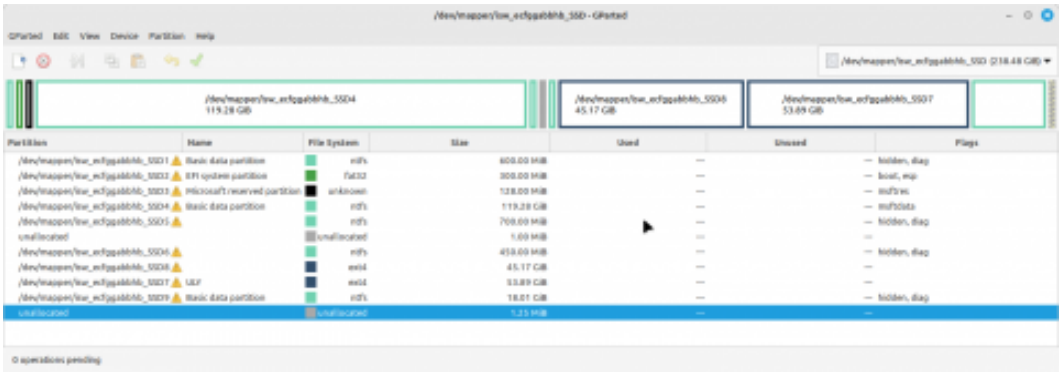
• Post by **Jo-con-Ël** » Tue Jul 25, 2023

Without creating a software RAID from cratch as proposed on several tutorials, If you are planning to install Mint 21.X on BIOS RAID (AKA fake RAID) alongside previous installed OS (Windows or whatever) as it was possible on previous editions you can try as follows.
Gparted (also on terminal `parted`, `fdisk`...) and Mint installer show partitions on RAID volume (Disks does not) but they can't be accessed. Even it looks like installation begins a per GUI... but it is not.
Installing *mdadm* (*dmraid* will be installed by default) didn't solve the problem on accessing RAID volumes when I tried, but running `kpartx -a /dev/mapper/iswxxxxxxxxx` (replace iswxxxxx with real volume as per`ls /dev/mapper`) before trying to install did the trick as you can see on following terminal codes and images.
Before

Code: Select all

```
mint@mint:~$ ls /dev/mapper/
control  isw_ecfggabbhb_SSD
mint@mint:~$ sudo kpartx -l /dev/mapper/isw_ecfggabbhb_SSD

isw_ecfggabbhb_SSD1 : 0 1228800 /dev/mapper/isw_ecfggabbhb_SSD 2048
isw_ecfggabbhb_SSD2 : 0 614400 /dev/mapper/isw_ecfggabbhb_SSD 1230848
isw_ecfggabbhb_SSD3 : 0 262144 /dev/mapper/isw_ecfggabbhb_SSD 1845248
isw_ecfggabbhb_SSD4 : 0 250154353 /dev/mapper/isw_ecfggabbhb_SSD 2107392
isw_ecfggabbhb_SSD5 : 0 1433600 /dev/mapper/isw_ecfggabbhb_SSD 252262400
isw_ecfggabbhb_SSD6 : 0 921600 /dev/mapper/isw_ecfggabbhb_SSD 253698048
isw_ecfggabbhb_SSD7 : 0 113012736 /dev/mapper/isw_ecfggabbhb_SSD 349341696
isw_ecfggabbhb_SSD8 : 0 94722048 /dev/mapper/isw_ecfggabbhb_SSD 254619648
isw_ecfggabbhb_SSD9 : 0 37773312 /dev/mapper/isw_ecfggabbhb_SSD 462354432
```

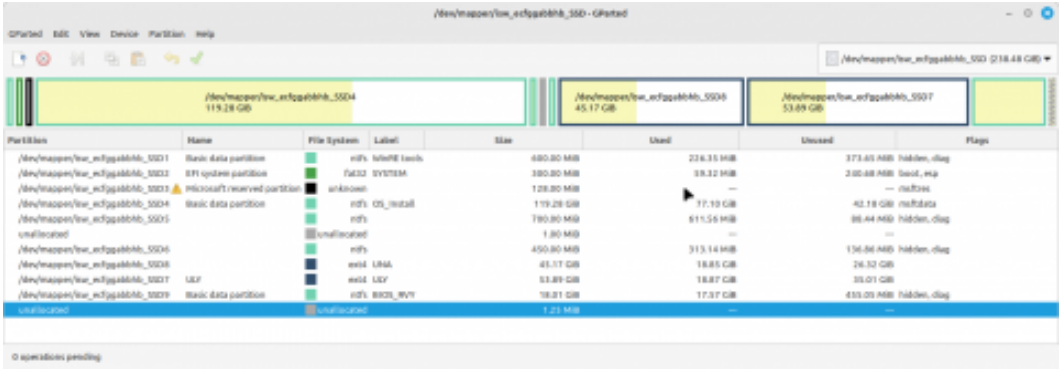


After running kpartx

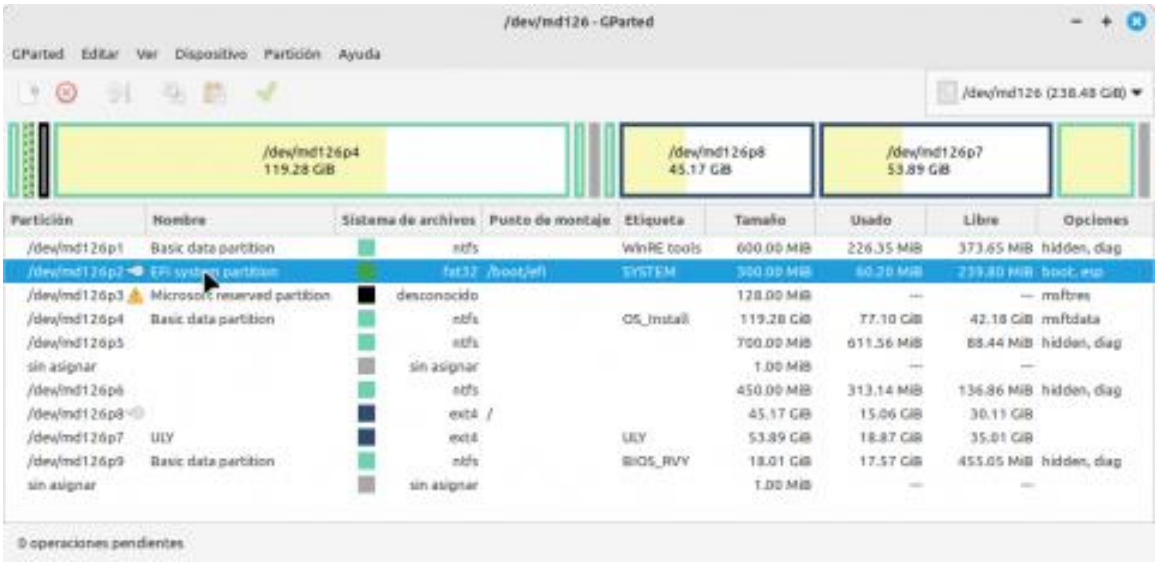
Code: Select all

```
mint@mint:~$ sudo kpartx -a /dev/mapper/isw_ecfggabbhb_SSD

mint@mint:~$ ls /dev/mapper/
control               isw_ecfggabbhb_SSD1  isw_ecfggabbhb_SSD3
isw_ecfggabbhb_SSD5  isw_ecfggabbhb_SSD7  isw_ecfggabbhb_SSD9
isw_ecfggabbhb_SSD  isw_ecfggabbhb_SSD2  isw_ecfggabbhb_SSD4
isw_ecfggabbhb_SSD6  isw_ecfggabbhb_SSD8
```



Most probably, on first boot you will get bussybox/initramfs shell and need to do as indicated above, i.e. on shell run `ls /dev/mapper` to be sure this is the problem and then run `kpartx -a /dev/mapper/iswxxxxxx`) and last `exit` to going on starting. You can add that codes as indicated here in order to avoid that problem on the future.
fter solving first <initramfs> shell I did not follow indication on last link to include kpartx on initramfs.
The underlaying problem in my case as per `journalctl | grep raid` was
dmraid-activate[987]: ERROR: Cannot retrieve RAID set information for isw_ecfggabbhb_SSD
dmraid-activate[988]: ERROR: Cannot retrieve RAID set information for isw_ecfggabbhb_SSD
udisksd[1318]: failed to load module mdraid: libbd_mdraid.so.2: cannot open shared object file: No such file or directory
udisksd[1318]: Failed to load the 'mdraid' libblockdev plugin
I solved that problem on the past installing *libblockdev-mdraid2* but it also installs *mdadm* as dependency and the aside efect is it change the way RAID volume is mapped.



Then I did change */etc/fstab* as it was identifying partition by /dev and it will cause another issues. Now problem is solved: no more initramfs shell and no errors on journal.

Code: Select all

```
cat /etc/fstab
# /etc/fstab: static file system information.
#
# Use 'blkid' to print the universally unique identifier for a
# device; this may be used with UUID= as a more robust way to name devices
# that works even if disks are added and removed. See fstab(5).
#
# <file system> <mount point>   <type>  <options>       <dump>  <pass>
#root was as /dev/mapper/sw_ecfggabbhb_SSD8 but changed by UUID
UUID=cfc87e51-0ad7-44af-a56b-43c6b4baa8bc /               ext4
noatime,errors=remount-ro 0       1
#EFI was as /dev/mapper/isw_ecfggabbhb_SSD2 but I changed it
UUID=74FB-6379 /boot/efi       vfat    umask=0077      0       1
/swapfile                                 none            swap    sw
0       0
```

Last edited by Jo-con-Ël on Tue Jul 25, 2023 1:07 pm, edited 10 times in total.
Arrieritos semos y en el camino nos encontraremos.

rene

Level 20

Posts: 12208
Joined: Sun Mar 27, 2016
Contact rene

Re: Installation appears frozen

- Post by **rene** » Tue Jul 25, 2023

Jo-con-Ël wrote: ↑Tue Jul 25, 2023 [...] running `kpartx -a /dev/mapper/iswxxxxxxxxx` before trying to install did the trick
Thanks for the information. Odd that that makes a difference...
25 posts

Re: Installation appears frozen

- Post by **Lefty** » Tue Jul 25, 2023

Well, thanks for all that, but to me it's like reading a Russian novel written in Greek.
I gave up on the RAID and this is what my GParted looks like now:
http://www.tcw.org/GParted 2023-07-25.png
http://www.tcw.org/GParted-2 2023-07-25.png

Help me to understand what this means. Remember I am a Linux newbie.
So it creates a System Partition like Windows, but what is the /dev/sda1 tag all about?
And why is it fat32 rather than ntfs or something else?
Same with /dev/sda2, what does that mean?
What is ext4 filesystem?
On disk2 I made it ntfs when given a choice. What that bad?
Inquiring minds...

Jo-con-Ël

Level 9

Posts: 2790
Joined: Sun Jun 20, 2021 11:41 am
Location: donde habita el olvido
Contact Jo-con-Ël

Re: Installation appears frozen

- Post by **Jo-con-Ël** » Tue Jul 25, 2023

rene wrote: ⇗Tue Jul 25, 2023 Odd that that makes a difference...
I agree but it works.
Last edited by Jo-con-Ël on Tue Jul 25, 2023, edited 2 times in total.
Arrieritos semos y en el camino nos encontraremos.

rene

Level 20

Posts: 12209
Joined: Sun Mar 27, 2016
Contact rene

Re: Installation appears frozen

- Post by **rene** » Tue Jul 25, 2023

Lefty wrote: ⇗Tue Jul 25, 2023 On disk2 I made it ntfs when given a choice. What that bad?
Yes. NTFS is for an internal drive only useful in the context of interoperability with a dual-boot copy of Microsoft Windows on the same system. It's otherwise a filesystem which doesn't (natively, and practically) support the to UNIX systems core filesystem concept of per file/directory ownership and permissions, is due to its (current) implementation in userspace rather than in the kernel a huge amount slower than say ext4 (the "most native" Linux filesystem type) -- and **is** implemented in userspace rather than the kernel in the end due it being a proprietary, closed-source and not necessarily well-enough documented filesystem, which primarily features when some form of filesystem damage occurs: you'd want Windows rather than Linux to try and interpret that mess. I.e., very much advised to reformat it ext4 (note also that you will *need* to be able to use it for Timeshift).
Your links are still not clickable. Please use e.g. `[url]http://www.tcw.org/GParted 2023-07-25.png[/url]` syntax.

`/dev/sda`, `/dev/sdb`, etc., is how Linux refers to SATA (and USB-storage) devices. Any device -- well, network cards are an exception... -- in a UNIX system exist as a "device node" like that in the `/dev` directory and can be addressed as such. If you'd for example want to partition drive `/dev/sda` you'd say `fdisk /dev/sda`. An NVMe drive would be `/dev/nvme0n1`, `/dev/nvme1n1`, a first optical drive `/dev/cdrom` -- so on, so on. The additional number in the case of mass-storage devices indicates the partition: `/dev/sda1` is the first partition of drive `/dev/sda`.

An EFI System Partition (ESP) is used by a UEFI firmware to load operating systems from. It's not a Linux thing, and it needs to be be FAT-formatted for a UEFI firmware to be able to use it. What *is* a Linux thing, or more specifically an Ubuntu hence Mint thing, is that the installer also creates an ESP if you are booting in Legacy mode, either by option or by not having a UEFI firmware in the first place. It's a "let's be compatible with anything" thing of the already mentioned new Ubuntu installer. Can't tell from what you posted if you are using Legacy or UEFI boot: in former case you can ignore it as an oddity, in latter it's where Grub (the Linux boot-loader) lives and from where it's loaded and executed by your firmware at boot.

`/dev/sda2` is where your Mint root filesystem lives, i.e, is your Mint system. `/dev/sdb1` is as said in dire need of being reformatted to ext4.

rene

Level 20

Posts: 12209
Joined: Sun Mar 27, 2016
Contact rene

Re: Installation appears frozen

- Post by **rene** » Tue Jul 25, 2023

Jo-con-Ël wrote: ⇗Tue Jul 25, 2023 I agree but it works.
Very good to know. Or well, very-ish: I've currently only one Mint system up and have on it as linked above gone with mdadm software RAID. It remains to be seen whether or not I have future interest in Ubuntu/Mint installers left... 😀

Lefty

Level 1

Posts: 12
Joined: Sun Jul 23, 2023
Contact Lefty

Re: Installation appears frozen

- • Post by **Lefty** » Tue Jul 25, 2023

rene,
Very good info on drives, will reformat before i start filling it up.
And now I understand about the links in this forum. Have to put some code at beginning and end.
Now if I understood why Mint installs an non upgradeable version of Firefox, *controlled by your administrator*
I downloaded and installed the current and upgradable version.
I also installed an interface tweaker (ubuntu-tweak) and AV (ClamAVNet) software and can't find them on my system. The just don't show up anywhere I can find.
I know this is off thread, but I don't like being confused by something simple like this.

rene

Level 20

Posts: 12209
Joined: Sun Mar 27, 2016
Contact rene

Re: Installation appears frozen

- Post by **rene** » Tue Jul 25, 2023

Lefty wrote: ⤴Tue Jul 25, 2023 Now if I understood why Mint installs an non upgradeable version of Firefox, *controlled by your administrator*. I downloaded and installed the current and upgradable version. It does not [install a ...] and you should not have replaced it. Firefox is updated through the Mint Update Manager in the very same manner as *all* OOTB installed software is. Firefox was just telling you that it wasn't updating *itself* -- as it shouldn't since it's on Linux the job of the distribution to test and integrate software and not of each individual user such as on Windows. Also see viewtopic.php?p=2146018#p2146018
Now -- the reason the Firefox message is so confusingly formulated is that Mint delivers basically the vanilla upstream version, so using a self-installed vanilla upstream version isn't necessarily *very* bad but it's not the idea of things, and if it now breaks anything it's you personally who gets to deal with the fallout, not Mint.
You should also have not installed "AV". Viruses do for all practical intents and purposes not exist on desktop Linux -- and especially once you get out of the Windows habit of installing things from around the web rather than through your distribution -- and the only thing you've done is slow down your computer for no actual reason, while adding a large attack surface in the form of something a Linux desktop virus would if it *were* to exist try for first of all.
This forum is also riddled with threads concerning *that* matter and in many of them you'd find me getting progressively more tired of that antivirus nonsense, most specifically, of the invariably technically clueless people pushing that nonsense agenda, which is to say I won't begin a new one yet again: you'll have no trouble finding them on the forum (tip: the forum-search rather sucks but you can use e.g. Google if you add "site:forums.linuxmint.com" to the query).

Lefty

Level 1

Posts: 12
Joined: Sun Jul 23, 2023
Contact Lefty

Re: Installation appears frozen

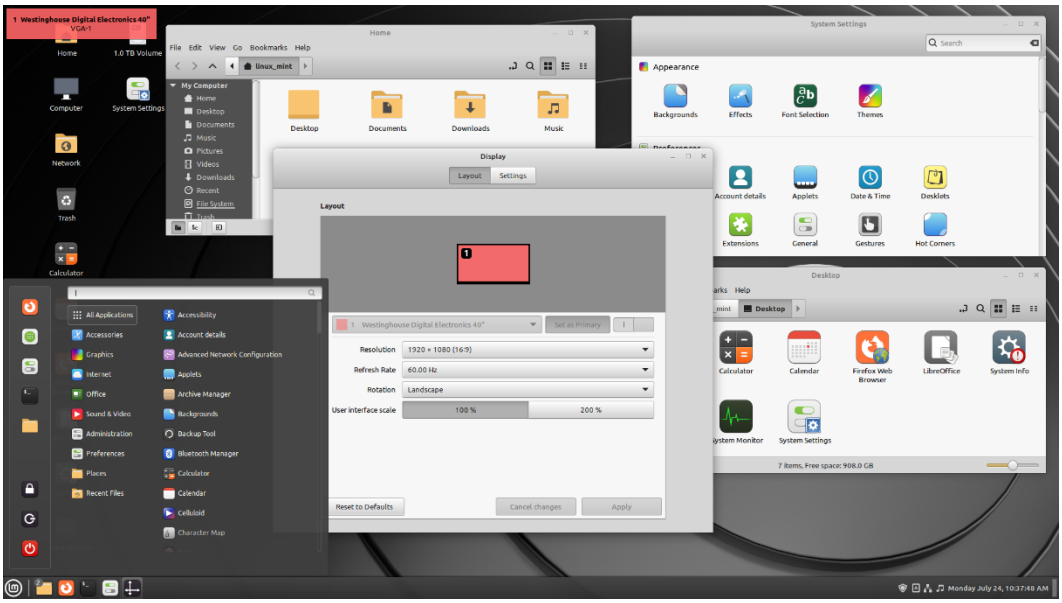
- Post by **Lefty** » Wed Jul 26, 2023

thanks again for your comprehensive response.
My initial research found a distinctive split on Linux AV. I have not seen the argument regarding providing an attack surface however and will consider that further.

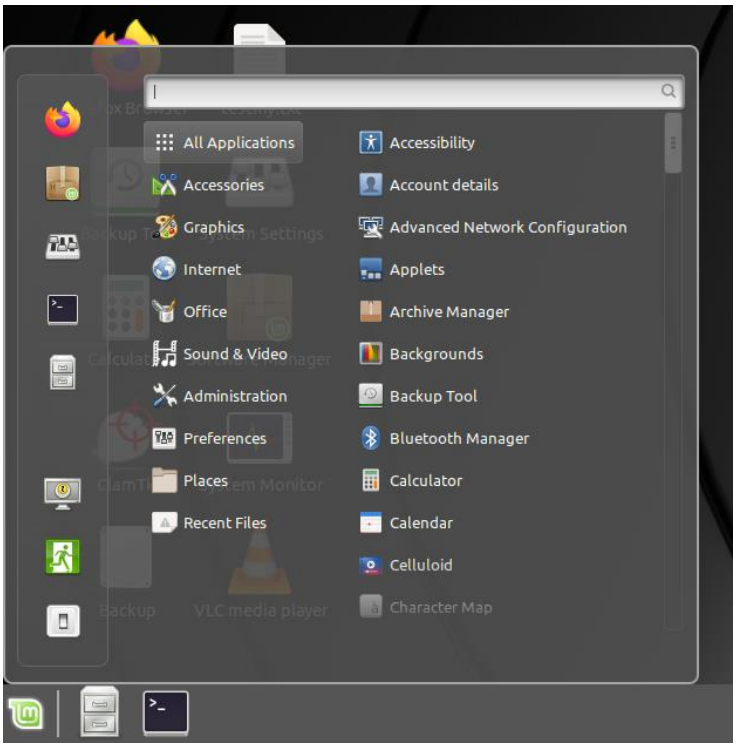
all this being said, I've been at this computer business for almost forty years now and at the age of 71, having been sheltered by DOS and Windows, I have just had a somewhat rare but profound epiphany.
You can install software in Linux and not see it show up visibly in any application list. You need to know where it lives and then run it from a terminal window.
That is unless you also download an interface for it, which is what I ended up doing with the AV software.
To me software without an interface is not software. It is code.
If you have to run it from a command line, it is code. Or back in the day, a batch file re: autoexec.bat
If it doesn't have a user interface to me it is just code.
If it has a user interface it is actually application software or perhaps even an Operating System.

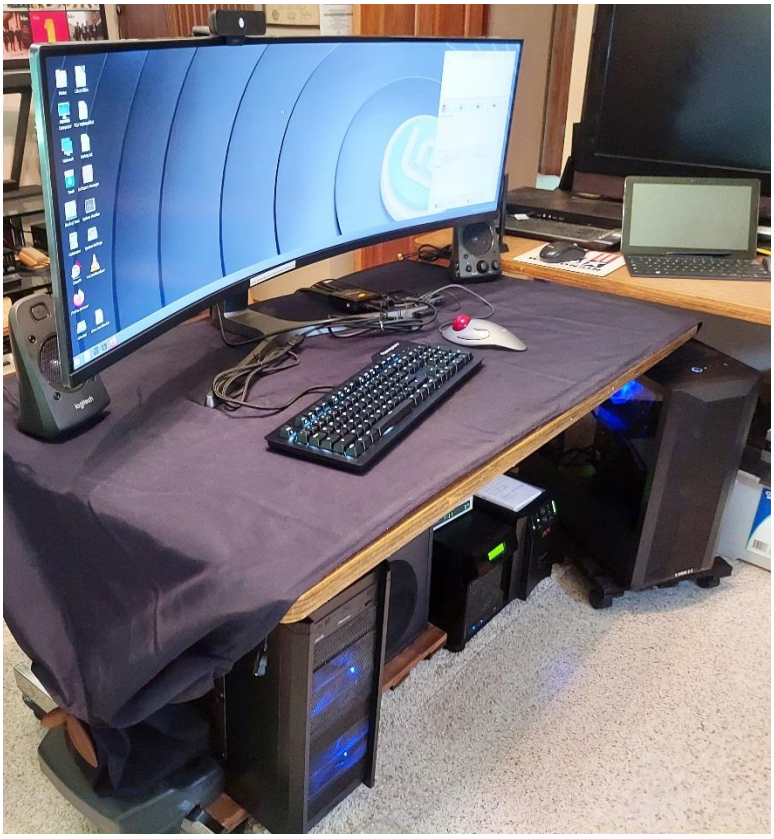
Allow me to quote Mark Lucovsky here. *"What we know for sure here is good user interfaces are crucial for good user experiences. It really doesn't matter how good a technology is; if we designers don't provide a user interface as intuitive and attractive as possible, the technology will hardly reach a breakthrough point. To gain interest in a product or technology, users need to recognize its advantages or find themselves impressed or involved with the technology in some way."*
Microsoft's new generation of coders either forgot this lesson of the Elders, or never learned it.
Linux has never embraced this idea to the extent that it could become more that 3% of the OS market.
Rant off. Thanks again.

So once installed I was able to play around with the interface.



And I even got the Start Menu to be transparent. Now I need to do the same to the taskbar and get better looking icons, etc.





EDID translation

- Post by **Lefty** » Wed Aug 02, 2023

Having trouble with a StarTech KVM on Mint.
Here is what StarTech says:
What you will want to look into is EDID detection within Linux mint.
Windows PE systems, imaging programs, and some Linux systems, may have issues like you described because a service which controls hot-plug EDID detection isn't being included in the operating system. This is not a fault of the KVM switch specifically, but more that the computers are having hot-plug EDID detection issues. There are 2 potential workarounds for this: either they will need to enable/add whichever service is missing, or you could use an EDID emulator between the computer and KVM switch. Unfortunately with DisplayPort these emulators are typically expensive and we don't manufacture any.
Is there a service that needs to be turned on?
Can you translate this info?
Thanks

SMG

Level 25

Posts: 25471
Joined: Sun Jul 26, 2020 5:15 pm
Location: USA
Contact:
Contact SMG

Re: EDID translation

- Post by **SMG** » Wed Aug 02, 2023 2:12 pm

*Lefty wrote: ⇗Wed Aug 02, 2023 10:53 am*Is there a service that needs to be turned on?
No. Hot-plug capability is defaulted to always be on. I am not aware of a way to turn it off (and people have asked if they could turn it off).
You have not provided any information about the problem you are having or your computer, but I'll make general comments based on what I've seen in other situations.
Lefty wrote: ⇗Wed Aug 02, 2023 10:53 am This is not a fault of the KVM switch specifically, but more that the computers are having hot-plug EDID detection issues.
It likely is a problem with the KVM switch because the KVM is not retaining the EDID so the computer notices it missing and assumes the monitor is no longer there. When the EDID information disappears, the computer assumes the monitor has been turned off or disconnected.
The EDID in a monitor passes through the cable to the computer. By adding a KVM, you are adding another piece of equipment in the link.
Some KVMs will retain the EDID information from the monitor even if the connection to the monitor is switched such that there is no longer a direct connection between the monitor and the computer (such as when the monitor is switched to use the non-Linux Mint computer). When buying KVMs, you want to

check the reviews to make sure they work on Linux-based distros. Not all will.

Lefty wrote: ⤴Wed Aug 02, 2023 10:53 am There are 2 potential workarounds for this: either they will need to enable/add whichever service is missing
There is no service missing.

*Lefty wrote: ⤴Wed Aug 02, 2023 10:53 am*or you could use an EDID emulator between the computer and KVM switch. Unfortunately with DisplayPort these emulators are typically expensive and we don't manufacture any.
This emulator would retain the EDID such that even if the link between the monitor and the computer is broken, the EDID does not disappear so Linux Mint thinks a monitor is still attached.
They are correct that these devices are much more expensive for DP ports. They are actually rather common and nowhere near as expensive for HDMI ports. These types of devices are common for headless computers, but you would need one which is an inline device which most for headless computers are not.
Here is an example HDMI one.
Here is an example DP one.

A woman typing on a laptop with LM20.3 Cinnamon.

Lefty
Level 1
Posts: 19
Joined: Sun Jul 23, 2023 9:56 am
Contact:
Contact Lefty

Re: EDID translation

• • Post by **Lefty** » Wed Aug 02, 2023

SMG,
Looking back by OP was insufficient. What I should have written is that when switching between a Windows and Linux computer, Windows is fine but it only occasionally works on the Linux box and sometimes it takes 5-10 min to kick in. Mostly i have to hit the reset button, and Linux is remarkable more resilient to that bad user behaviour than Windows is.
The info for the KVM says *OS independent*, but the technical info says only Mac and Windows. This is however due to no hot keys for Linux.
Guess I have to buy an EDID injector, so much for cheap KVM's.
PS. in the process of this I did find a cool util on GitHub called Persistent Windows that keeps your windows from moving around in Windows. Linux does not have this problem.
I guess that you are a level 25 for good reason.
Thanks

SMG

Level 25

Posts: 25471
Joined: Sun Jul 26, 2020
Location: USA
Contact:
Contact SMG

Re: EDID translation

- Post by **SMG** » Wed Aug 02, 2023

Lefty wrote: ⤴Wed Aug 02, 2023 7:44 pm The info for the KVM says *OS independent*, but the technical info says only Mac and Windows. This is however due to no hot keys for Linux.
See if you can find reviews for the device you have. Maybe someone else has it and there are some tricks to get it more responsive (faster to kick in).
Lefty wrote: ⤴Wed Aug 02, 2023 7:44 pm Guess I have to buy an EDID injector, so much for cheap KVM's.
If you do decide to do this, pay close attention to the specs for the device. Some have limitations for resolutions it can hold.
Live image backup
7 posts • Page **1** of **1**

Lefty

Level 1

Posts: 19
Joined: Sun Jul 23, 2023
Contact:
Contact Lefty

Then some communications with StarTech Tech Support following an ineffective chat session and a phone call.

[8/1/2023, 4:35:10 PM] Narad: Thank you for contacting StarTech.com, my name is Narad and I'll be happy to help. Before we begin, would you mind confirming where you're chatting to us from? (Country) - This is for our records
[8/1/2023, 4:35:27 PM] Lefty Insider: US
[8/1/2023, 4:35:35 PM] Narad: Thanks - One moment while I have a look at that product
[8/1/2023, 4:36:56 PM] Narad: Okay, I've pulled it up - Can you tell me a bit about the issues being experienced?
[8/1/2023, 4:38:43 PM] Lefty Insider: Two computers both with NVidia DP display adapters. One Windows the other Linux. When switching from Windows to Linux it does not always switch. Sometimes it takes 5 min. and others it takes a Linux reset. I have monitor power saving and screen saver turned off on the Linux machine.
[8/1/2023, 4:40:02 PM] Narad: Got it - I think the main reason this issue is being experienced is due to the fact that this KVM only supports Windows based and Mac based Operating Systems
[8/1/2023, 4:42:31 PM] Lefty Insider: From your website "This DP KVM switch is OS independent, meaning it can work with any USB-A and DisplayPort equipped desktop computer or laptop."
[8/1/2023, 4:43:18 PM] Narad: Under the tech specs tab at the following page is where I would have seen the OS requirements - https://www.startech.com/en-us/server-management/sv211dpua4k
[8/1/2023, 4:43:57 PM] Narad: But I do see what you're saying on the Overview - I would need to point this out to the website team
[8/1/2023, 4:44:33 PM] Narad: I apologize for any inconvenience caused by this error
[8/1/2023, 4:45:18 PM] Lefty Insider: So what do you suggest I do, and I don't understand why the OS makes any difference at all. It is the DP and USB signals are the same.
[8/1/2023, 4:47:56 PM] Narad: I'd recommend trying to do a full KVM reset by disconnecting both PCs, and powering down both. Then, reconnect one at a time to the KVM. Another thing I'd like to confirm - You mentioned using Nvidia Display Adapters - Can you elaborate a bit on what they are being used for? IE - Conversion to DP from another technology like HDMI?
[8/1/2023, 4:49:11 PM] Lefty Insider: Might be a language problem here. These are the video cards in the machines.
[8/1/2023, 4:49:29 PM] Narad: Ah - I misunderstood
[8/1/2023, 4:49:36 PM] Lefty Insider: I am looking at the SV231DPU34K. Will this solve my problem?
[8/1/2023, 4:49:50 PM] Narad: So it's direct DP to DP cables being used from each PC, correct?
[8/1/2023, 4:50:29 PM] Lefty Insider: Yes, I don't see OS requirements on the SV231DPU34K
[8/1/2023, 4:50:55 PM] Narad: It mentions Linux specifically in the overview -
Windows, Mac & Linux Compatible
While supporting Windows, this DP KVM switch is also compatible with Mac and Linux operating systems.
[8/1/2023, 4:52:13 PM] Lefty Insider: Ok, so let's trade mine in and I will pay the difference, although your website was wrong.
[8/1/2023, 4:52:50 PM] Narad: Unfortunately, we'd be unable to perform a trade in - Can you confirm where the device was purchased and when?
[8/1/2023, 4:53:22 PM] Lefty Insider: EBAY on 7/25/23
[8/1/2023, 4:54:01 PM] Lefty Insider: Seller is beachaudio
[8/1/2023, 4:54:36 PM] Narad: Okay, and are you covered by the "Ebay Buyer Protection"?
[8/1/2023, 4:54:51 PM] Narad: (Sorry if that's not the exact verbiage)
[8/1/2023, 4:55:50 PM] Lefty Insider: Ok, but this is your problem and your customer service should be able to handle this.

[8/1/2023, 4:56:56 PM] Narad: I understand what you're saying Lefty, however Ebay is not one of our authorized resellers. There's no way to tell if the item you purchased was previously used (even if it was listed a new device).
[8/1/2023, 4:57:34 PM] Lefty Insider: Well that is a BS answer. What is the phone number for your customer service dept.?
[8/1/2023, 4:58:01 PM] Narad: 1 800 265 1844
[8/1/2023, 4:58:50 PM] Lefty Insider: Will speak with them
[8/1/2023, 4:58:59 PM] Narad: Absolutely

-------- Original Message --------
Subject: StarTech.com: CAS-47474:
Date: 2023-08-01 17:25
From: StarTech.com Technical Support <support@startech.com>
To: Lefty <N0STIS@TCW.org>
Hello Lefty,
What you will want to look into is EDID detection within Linux mint.
Windows PE systems, imaging programs, and some Linux systems, may have issues like you described because a service which controls hot-plug EDID detection isn’t being included in the operating system.
This is not a fault of the KVM switch specifically, but more that the computers are having hot-plug EDID detection issues. There are 2 potential workarounds for this: either they will need to enable/add whichever service is missing, or you could use an EDID emulator between the computer and KVM switch.
Unfortunately with DisplayPort these emulators are typically expensive and we don’t manufacture any.
Another thing to check is to switch the Linux and PC boxes ports to see if the issue is consistent between port 1 and 2 or between the systems as described.
Please let us know if you have any other questions, etc.
Sincerely,
EN

-------- Original Message --------
Subject: Re: StarTech.com: CAS-47474:
Date: 2023-08-02 19:49
From: n0stis@tcw.org
To: "StarTech.com Technical Support" <support@startech.com>

Here is some information so that you can better advise your future customers.
This KVM _is_ the problem.

Re: EDID translation
Post by SMG » Wed Aug 02, 2023 2:12 pm

> Lefty wrote: ⬏Wed Aug 02, 2023 10:53 am
> Is there a service that needs to be turned on?

No. Hot-plug capability is defaulted to always be on. I am not aware of a way to turn it off (and people have asked if they could turn it off).
You have not provided any information about the problem you are having or your computer, but I'll make general comments based on what I've seen in other situations.

> Lefty wrote: ⬏Wed Aug 02, 2023 10:53 am
> This is not a fault of the KVM switch specifically, but more that the computers are having hot-plug EDID detection issues.

It likely is a problem with the KVM switch because the KVM is not retaining the EDID so the computer notices it missing and assumes the monitor is no longer there. When the EDID information disappears, the computer assumes the monitor has been turned off or disconnected.

The EDID in a monitor passes through the cable to the computer. By adding a KVM, you are adding another piece of equipment in the link.

Some KVMs will retain the EDID information from the monitor even if the connection to the monitor is switched such that there is no longer a direct connection between the monitor and the computer (such as when the monitor is switched to use the non-Linux Mint computer). When buying KVMs, you want to check the reviews to make sure they work on Linux-based distros. Not all will.

> Lefty wrote: ↗Wed Aug 02, 2023 10:53 am
> There are 2 potential workarounds for this: either they will need to enable/add whichever service is missing

There is no service missing.

> Lefty wrote: ↗Wed Aug 02, 2023 10:53 am
> or you could use an EDID emulator between the computer and KVM switch. Unfortunately with DisplayPort these emulators are typically expensive and we don't manufacture any.

This emulator would retain the EDID such that even if the link between the monitor and the computer is broken, the EDID does not disappear so Linux Mint thinks a monitor is still attached.

They are correct that these devices are much more expensive for DP ports. They are actually rather common and nowhere near as expensive for HDMI ports. These types of devices are common for headless computers, but you would need one which is an inline device which most for headless computers are not.

Here is an example HDMI one.
Here is an example DP one.

Logitech Marble Mouse

I need a utility to disable the third and fourth mouse buttons.
I use Advanced Mouse Manager on Windows, but can't find one for Linux Mint.
Any ideas?
Thanks
4 comments
Post Insights
Only you and mods of this community can see this
305
Total Views
100%
Upvote Rate
1
Community Karma
0

Total Shares
Comment as N0stis

level 1
hmischuk

Maybe try this? It's not a direct answer to your question, but I think it can help to get you there.

https://help.ubuntu.com/community/MouseCustomizations

I kinda laughed when I saw this one in another link from my search results... it's a close parallel to your question, seconded by another user, but with no answer.

1

level 2
N0stis
Op

I was able to fix it this way:
:~$ xinput set-button-map 15 1 2 3 4 5 6 0 0 0
15 is the device ID and 8 is the demon button I wanted to kill.
Don't know what the other buttons are and don't care at this point as I only need left and right.

Then I needed to create a config file to keep it persistent.

Thanks for heading me in the right direction. Who needs a utility?

2

level 3
hmischuk

well done!!

1

level 2
N0stis
Op

Here is something funny I wrote awhile back.
https://www.tcw.org/lefty/ShortStories/The%20Story%20of%20the%20Demon Mouse.pdf

Live image backup

- Post by **Lefty** » Fri Aug 04, 2023

So I am a Linux newbie and have been researching image backups with great frustration.
I have used Norton Ghost for daily or weekly imaging on Windows for many years.
I am looking for those capabilities.
Live scheduled image backups of the complete drive, or multiple drives, to a USB drive
Individual file restores
What I found so far either requires a boot disk, won't work with Mint, or won't work with EXT4 partitions
It can be Open Source or proprietary. Free or cost.
Any ideas?
Thanks

deepakdeshp
Level 20
Posts: 11990
Joined: Sun Aug 09, 2015 9:00 am
Contact:
Contact deepakdeshp

Re: Live image backup

- Post by **deepakdeshp** » Fri Aug 04, 2023

Clonezilla very versatile and foxclone more user friendly. Both free.
If I have helped you solve a problem, please add **[SOLVED] t**o your first post title, it helps other users looking for help.
Regards,
Deepak

Mint 21.1 Cinnamon 64 bit with AMD A6 / 8GB
Mint 21.1 Cinnamon AMD Ryzen3500U/8gb

rossdv8

Level 7

Posts: 1604
Joined: Wed Apr 23, 2014 3:48 am
Location: Within 2,000 kilometres of Alice Springs, Australia
Contact:
Contact rossdv8

Re: Live image backup

- Post by **rossdv8** » Fri Aug 04, 2023

I decided to use Foxclone to backup my complete Mint install and all my files in /home from my 1TB drive to a new 2TB drive.
I've used other methods before, inclusding Clonezilla, but I found Foxclone was dead easy, 'Provided' you RTFM first - then re-read any bits you are not sure of.
Because my 1TB drive was pretty full and there were a LOT of very large files, it took a long time, but it all worked flawlessly.
Foxclone is actively worked on by a member of this forum, so you'll see a few Topics that have quite a bit of advice, and it is very well, and very clearly documented. From memory, the Manual was part of the download, and is live on the system after tou burn the ISO to USB and run Foxclone form the Live USB media.
What I found so far either requires a boot disk, won't work with Mint, or won't work with EXT4 partitions
You're pretty well right there. Anything that backs up your entire Hard Drive including the ROOT partition (backing up your Live and current Operating version of Mint) requires access to file in the root partition and as far as I know cannot be accessed while Mint is actually running.
So any backup solution that needs to back up your actual Operating System, needs to be started by an external 'LIVE media. That's true of things like Clonezilla AND Foxclone.
If however you only want to back up your documents and files, and don't need to back up Mint itself - you can use Mint's own backup tool, or one of a number of others available.
If you want to back up Mint's operating system to be able to restore it 'as it was right now' , later on, say if you break something and want to go back to a working version - you can simply use Timeshift.

Current main OS: **MInt 21.2 'VICTORIA' Xfce 4.18 with KDE installed (using Compiz as WM)** on Lenovo m900 Tiny, i5-6400T (intel HD 530 graphics) 16GB RAM, and m93p Tiny, 4590T (intel i915 graphics) 16GB RAM.
Sharks usually only attack you if you are wet

AndyMH

Level 20

Posts: 12326
Joined: Fri Mar 04, 2016
Location: Wiltshire
Contact:
Contact AndyMH

Re: Live image backup

- Post by **AndyMH** » Fri Aug 04, 2023

None of the linux image backup utilities will work booting from your normal system. You have to guarantee that nothing changes while doing the backup. To do that the utilities unmount the partition they are backing up. You cannot unmount / booting normally, hence the need to boot from a separate OS, i.e. downloading the iso, burning it to a stick and booting from it.
Don't rely on image backup as your only backup, use it for disaster recovery. They know nothing about files, just used blocks on partitions. So a restore has to restore a complete partition, maybe overwriting more recent files.
Use a combination of file level and image level backup. Use timeshift to look after the system (think of it like a win restore point), save your snapshots on an ext4 partition on another drive. Timeshift is installed by default. For your data and config files (contents of home), there are a number of utilities, I use backintime (install from software manager). Works just like timeshift, takes snapshots. File level backup can be done booting normally so it is a lot more convenient than image backup. It is also a lot quicker, after the first snapshot it only copies what has changed.
One feature of timeshift/backintime, every snapshot is complete. For files that have not changed, they make extensive use of hard links to point at the original backup copy. This does not require any additional space (or very little). Win filesystems do not support hard links which is why the destination must be ext4.
I take a foxclone image backup once every few months, I have timeshift/backintime running daily. If there is a major disaster, foxclone will get me back a working system, timeshift/backintime will get me back to yesterday.
Thinkcentre M720Q - LM21.2 cinnamon, 4 x T430 - LM21.2 cinnamon, Homebrew desktop i5-8400+GTX1080 Cinnamon 19.0

Lefty

Level 1

Posts: 19
Joined: Sun Jul 23, 2023 9:56 am
Contact:

Contact Lefty

Re: Live image backup

- Post by **Lefty** » Fri Aug 04, 2023

Thanks for all the responses, but you have only restated the deficiencies of the software I have already investigated.
"None of the linux image backup utilities will work booting from your normal system."
How does Windows Backup and Ghost manage to do this and Linux software cannot?
"Don't rely on image backup as your only backup, use it for disaster recovery. They know nothing about files, just used blocks on partitions. "
Again, Ghost allows individual recovery within the image. So it does both and I _have_ been relying on it for 20 years.

Lady Fitzgerald
Level 13
Posts: 4671
Joined: Tue Jan 07, 2020 2:12 pm
Location: AZ, SSA (Squabbling States of America)
Contact:
Contact Lady Fitzgerald

Re: Live image backup

- Post by **Lady Fitzgerald** » Fri Aug 04, 2023

Lefty wrote: ⇗Fri Aug 04, 2023 8:42 am Thanks for all the responses, but you have only restated the deficiencies of the software I have already investigated.
"None of the linux image backup utilities will work booting from your normal system."
How does Windows Backup and Ghost manage to do this and Linux software cannot?
"Don't rely on image backup as your only backup, use it for disaster recovery. They know nothing about files, just used blocks on partitions. "
Again, Ghost allows individual recovery within the image. So it does both and I _have_ been relying on it for 20 years.
The key thing to remember here is Linux is not Windows. I repeat, Linux is NOT Windows. Despite similar desktops in some distros, they operate completely differently under the hood so it's unrealistic, not mention unfair, to have the same expectations of both. To successfully migrate from Windows to Linux, you pretty much have to forget much, if not most, of what you learned in Windows and start over again with how things are done in Linux. This will involve learning new programs and developing new workflows. It's like switching from driving a car with an automatic transmission to a large truck with a 13 speed manual transmission or vice versa. Having the same expectations for both is going to result in a lot of disappointments and frustration with both.

That said, I've used Symantec products, including Norton Ghost, in Windows XP in the distant past and, although they were effective, they were like viruses the way they embedded themselves in one's System and were resource hogs. I dropped them well before I upgraded to Win 7.

Even back while I was still on XP, I found keeping one's data folders and files segregated from the System (OS) folders and files to be far more efficient since it allowed one to use more efficient programs to back up each category in both Windows and Linux. In Linux, I found keeping my personal data (Documents, Music, Pictures, etc.) in a folder other than /home or on another drive(s) makes making and maintaining backups much easier, faster, and more space efficient.

Imaging programs, such as Foxclone, Rescuezilla, and Clonezilla are best for backing up one's Operating System. The size of image files are small enough to make keeping multiple images practical, allowing one to go back in time when restoring an image far enough to make sure the restoration goes back to before a problem had occurred in the System. However, if one includes one's data, the images become enormous and unwieldly, too huge to make keeping more than one (maybe two) versions on hand. It also takes far, far longer to create the image, tying up the computer for a ridiculous amount of time while the image is being made.

For backing up data, a folder/file syncing program is far more efficient. They create what is essentially a copy of your data onto a backup drive, preferably an external one. However, they are far more efficient than merely copying and pasting data from one place to another and are often more reliable. When set to Mirror mode (not the same as RAID 1), they work by comparing the source data on one drive to the data that's on the destination drive (aka the backup drive, again, preferably external), then copying from the source drive to the destination drive and deleting any data on the destination drive that's not on the source drive. Since, after creating the initial backup, only files that have changed since the previous backup update will be involved, updating backups will take tremendously less time. FreeFileSync can also be set to verify each operation on the fly (this almost doubles the time needed to run FreeFileSync but, since it runs in the background, it's not a problem).

I've been using FreeFileSync for backing up my data since my latter days in Windows XP (FreeFilesync is one of the rare programs that has versions for Windows and Linux). Unlike imaging programs that tie up a computer while operating, one can still use the computer while FreeFileSync is running.

There is a third kind of backup in Linux that is most easily described by comparing it to System Restore in Windows. The Linux program comparable to System Restore is Timeshift. It is best used for quickly restoring the operating System to an earlier point in time. Unlike imaging programs, Timeshift can create images, called Snapshots, while running in the background while the computer is still being used. Timeshift can be set to automatically create and cull Snapshots but I prefer to run it manually to minimize the number of writes to my boot SSD and so i can label why each snapshot was made (it eliminates guesswork when choosing a snapshot to restore).

In a nutshell, Imaging is best used for completely replacing an Operating System that has become to messed up to easily repair or because that drive it's on has completely failed.

Folder/file syncing is best for quickly and accurately creating what is essentially an exact copy of a data drive or folder that can be used as is without the need of the program that created it to access individual folders or files. FreeFileSync has an option, called Versioning, that will send deleted files to the Trash bin or to a user designated Versioning folder so one can review the deleted files before completely deleting them.

Timeshift is best for quickly repairing an Operating System that still can be booted or restoring it to an earlier point in time.

I image my Operating System (I keep mine on separate boot drives) every Saturday morning (the program I use can also verify the image. You may find different time intervals to be better for you. It only takes five to fifteen minutes, depending on which computer I'm imaging. I also reboot my phone and internet modems and my router while the computer is tied up.

I run FreeFileSync every evening on days I have added, deleted. or changed. It takes only a few minutes and I can still use the computer while it is running.

I make a Timeshift Snapshot every Monday morning (and cull older ones if its folder starts to get too full). I also make a Snapshot before doing anyting dodgy, such as updating the Kernel, an NVIDIA update, adding or removing programs, etc.
Jeannie
To ensure the safety of your data, you have to be proactive, not reactive, so, back it up!

Lefty

Level 1

Posts: 19
Joined: Sun Jul 23, 2023 9:56 am
Contact:
Contact Lefty

Re: Live image backup

• • • Post by **Lefty** » Fri Aug 04, 2023

Well there is a lot there, so thank for typing all of that.
Very early on in my experience with computers, late 80's, I was told to do what the computer will allow you to do. Being of German heritage, I am more inclined to get _it_ to do what I want it to do. And that is the way I have been rolling for the past 30 plus years.
I just don't buy that whole "change your mindset" argument. Right is right and wrong is wrong. Good is good, bad is bad.
What is so special about the Linux Filesystem that you have to unmount a drive to make an image?
For example, I have a SMART error now on one of my backup drives for Windows. I can just clone that drive to a new drive and replace it. Is that bad?
I used to image thousands of machines with Ghost Enterprise on Windows Server. Sure the client needed to boot from a cd, but the server would broadcast the image while running live.
I am using Timeshift daily to back up to the second 2TB drive, but because I was unable to get Linux Mint 21.2 Cinnamon to install on a Bios RAID, I need a solution for both recovering individual files and restoring from a failed hard disk.
Let me ask you what you think of doClone. I attempted to download it but I got a warning about it being an insecure http download.
As a 30 year Windows user, I just see the limitations of Linux.
for example I had to remap a mouse button. In Windows I just used a util that put itself in the tray.
With Linux I could remap via terminal, but then to be persistent I had to create a config file. Then I couldn't save it because I didn't have permissions. So then I had to become a super user, but that software was not installed so I had to install that first. Sheesh!

Re: Live image backup

• Post by **Lady Fitzgerald** » Fri Aug 04, 2023

@Lefty Apparently, with your expectations, Linux will not be a good fit for you and you should consider staying with Windows. If you want a sports car, don't buy a pickup truck.
I disagree that right is right and wrong is wrong all the time. Life isn't black and white but frequently consists of shades of gray. It can also depend on how you define right and wrong.

Do I feel Linux is perfect? Heck no! Not even close. But nothing else is going to be perfect either. One has to be flexible and willing to adapt to change.
Jeannie
To ensure the safety of your data, you have to be proactive, not reactive, so, back it up!

Lefty

Level 1

Posts: 20
Joined: Sun Jul 23, 2023
Contact:
Contact Lefty

Re: Live image backup

• • • Post by **Lefty** » Fri Aug 04, 2023

So Windows is now a "sports car"?
Unless Linux developers understand that it is not enough to write code, but they also need to design and build a great interface for customers to want to use it.
Unless they understand that an OS needs to be able to image itself conveniently and do many of the other things that Windows has done for more than 30 years, Linux, all 200 varieties, will never be more than a 3% market niche product.
They need to understand that this in their own self-interest not to share your self-defeatist attitude.
I provide this advice Pro Bono.

rickNS

Level 8

Posts: 2388
Joined: Tue Jan 25, 2011
Contact:
Contact rickNS

Re: Live image backup

• Post by **rickNS** » Fri Aug 04, 2023

Lefty wrote: ⇗Fri Aug 04, 2023
Unless Linux developers understand that it is not enough to write code, but they also need to design and build a great interface for **customers** to want to use it.
What "customers" nearly all distributions of Linux are FREE to download, and install on as many machines as you like.

Lefty wrote: ⇗Fri Aug 04, 2023 Unless they understand that an OS needs to be able to image itself conveniently and do many of the other things that Windows has done for more than 30 years

Sorry, but your wrong on that point too, windows was never able to do this, the imaging/cloning software you mentioned in the OP is someone else's software that just happens to run on windows.

Lefty wrote: ⇗Fri Aug 04, 2023 2:53 pm Linux, all 200 varieties, will never be more that a 3% market niche product.
Of the home desktop market, yes, that's mainly because most are adverse to change, and lazy. Since they are giving it away for free no one much cares. However when it comes to important computers, (and smarter people) they are nearly 100% running Linux.
Mint 20.0, and 21.0 MATE on Thinkpads, 3 X T420, T450, T470, and X200

Lady Fitzgerald
Level 13
Posts: 4678
Joined: Tue Jan 07, 2020 2:12 pm
Location: AZ, SSA (Squabbling States of America)
Contact:
Contact Lady Fitzgerald

Re: Live image backup

- Post by **Lady Fitzgerald** » Fri Aug 04, 2023 3:57 pm

Lefty wrote: ⇗Fri Aug 04, 2023 2:53 pm So Windows is now a "sports car"?
Unless Linux developers understand that it is not enough to write code, but they also need to design and build a great interface for customers to want to use it.
Unless they understand that an OS needs to be able to image itself conveniently and do many of the other things that Windows has done for more than 30 years, Linux, all 200 varieties, will never be more than a 3% market niche product.
They need to understand that this in their own self-interest not to share your defeatist attitude.
I provide this advice Pro Bono.

- Maybe it's due to a possible language barrier but you have completely missed the point. First, my attitude is not defeatist. I just know better than to use a wrench instead of a hammer to drive a nail or use a hammer to drive a screw. Second, analogies do not define the point being made, which had to do with expectations; I never said Windows was a sports car. I could have just as easily and accurately said if you want to tow a 40' travel trailer (caravan), do not buy a Volkswagen and expect to be able to tow the travel trailer. It would have made the same point, one you completely missed. Expecting Linux to work like Windows is unrealistic. If you don't like the way Linux works or are unwilling to learn how to use Linux to accomplish what you need, then stick with Windows. No one is forcing you to use Linux, unlike Microsoft who has been, and still is, doing their darnedest to force people to use Windows.

  BTW, Linux's desktop market share has been slowly growing while Window's has been dropping at a faster rate. If you include non-desktop applications, such as servers, industrial machine control, etc. Linux beats the big fat holy hairy heck out of Windows.
- You need to get your head out of the past and your mindset out of its rut (I'm part German and had no trouble doing so, so don't blame your ethnicity for your inflexibility; I'm also part Irish so

be careful picking a fight with me). And keep your advice; it's worth less than what you are charging. Pretty much everyone here much prefers the way Linux Mint is designed over the way Windows is designed. For the record, I'm able to accomplish more with far less effort, far more privacy, and far more security using Mint than I was with Windows. I no longer have to be on the alert for broken updates, being a guinea pig for updates, forced to accept unwanted updates, and put up with Microsoft spying on me and abusing my data, including sharing/selling it to others.

Jeannie

To ensure the safety of your data, you have to be proactive, not reactive, so, back it up!

rossdv8

Level 7

Posts: 1606
Joined: Wed Apr 23, 2014
Location: Within 2,000 kilometres of Alice Springs, Australia
Contact:
Contact rossdv8

Re: Live image backup

- Post by **rossdv8** » Sat Aug 05, 2023

So then I had to become a super user, but that software was not installed so I had to install that first. Sheesh!
I've been using Linux for 25 years and I can't think of any time I've ever had to 'install software' to become a Super User' That just seems plain weird.
Current main OS: **MInt 21.2 'VICTORIA' Xfce 4.18 with KDE installed (using Compiz as WM)** on Lenovo m900 Tiny, i5-6400T (intel HD 530 graphics) 16GB RAM, and m93p Tiny, 4590T (intel i915 graphics) 16GB RAM.
Sharks usually only attack you if you are wet

Lefty

Level 1

Posts: 22
Joined: Sun Jul 23, 2023
Contact:
Contact Lefty

Re: Live image backup

- • Post by **Lefty** » Sat Aug 05, 2023 10:00 am

What "customers" nearly all distributions of Linux are FREE to download, and install on as many machines as you like.
What does free have anything to do with anything here?

Sorry, but your wrong on that point too, windows was never able to do this, the imaging/cloning software you mentioned in the OP is someone else's software that just happens to run on windows.
So I should stop making images with Windows backup on my wife's NUC with Win7Pro?
Of the home desktop market, yes, that's mainly because most are adverse to change, and lazy. Since they are giving it away for free no one much cares. However when it comes to important computers, (and smarter people) they are nearly 100% running Linux.
Oh, so Windows users are dumb for having all the stuff that improves their productivity?
Last edited by SMG on Sat Aug 05, 2023 11:46 am, edited 1 time in total.
Reason: *Removed the extra close quote tag.*

Lady Fitzgerald

Level 13

Posts: 4678
Joined: Tue Jan 07, 2020 2:12 pm
Location: AZ, SSA (Squabbling States of America)
Contact:
Contact Lady Fitzgerald

Re: Live image backup

- Post by **Lady Fitzgerald** » Sat Aug 05, 2023 10:57 am

I'm pretty much convinced English isn't your first language based you are consistently misunderstanding what people tell you.

Lefty wrote: Sat Aug 05, 2023 10:00 am
What "customers" nearly all distributions of Linux are FREE to download, and install on as many machines as you like.
What does free have anything to do with anything here?...
Market share is based on the number purchases. Since, other than commercial Linux desktop distros that get paid support and the ones that get loaded onto computers before the computers are sold, there is no easy way to measure the market share of Linux since it is given away, not sold. The same is true of programs since there is a higher percentage of free programs used by Linux users than by Windows users.

Lefty wrote: Sat Aug 05, 2023
Sorry, but your wrong on that point too, windows was never able to do this, the imaging/cloning software you mentioned in the OP is someone else's software that just happens to run on windows.
So I should stop making images with Windows backup on my wife's NUC with Win7Pro?...
He never said that. What he said is that Microsoft doesn't include the imaging program you are using in Windows programming; it's developed by a third party developer. What he said has nothing to do with whether you should use that program or no

Lefty wrote: Sat Aug 05, 2023
Of the home desktop market, yes, that's mainly because most are adverse to change, and lazy. Since they are giving it away for free no one much cares. However when it comes to important computers, (and smarter people) they are nearly 100% running Linux.

Oh, so Windows users are dumb for having all the stuff that improves their productivity?
You are reading too much into that comment as well as misunderstanding it. Just because he said "smarter" people are using Linux doesn't mean people still using Windows are dumb; smarter is a relative term. Someone with an IQ of 180 is smarter than someone with an IQ of 150 but that doesn't mean people with an IQ of 150 are dumb, especially since 100 is an average IQ.

Second, "lazy" doesn't mean "dumb" (BTW, "dumb" means "mute", not low intelligence). Even people with high intelligence can have an aversion to work.

Third, you assume using Windows always improves people's productivity. That is true only when people are required by employers, schools, Governments, etc. to use Windows and Windows software. There is more productivity programming for Windows because software developers have luxuries, such as food, transportation, and shelter, they have to support so they need to be able to market their work and Windows has the largest market (for now). But there are still plenty of productivity programs available for Linux.

Another reason many, if not most, people stick with Windows is it's what they are familiar with. As was pointed out, most people, apparently including you, do not want to go to the effort to learn how to use Linux and Linux apps, the very definition of lazy. If their first computer training was on Linux, they would be equally adverse to learning how to work with Windows.

If you don't want to go to the effort of learning how to use Linux as effectively, if not more so, as Windows, fine; no one is forcing you to do so. However, it's very rude of you to come here and insult people who are open minded enough to accept that Linux is not Windows and weren't too lazy to do the work necessary to learn how to use Linux properly. You have insulted the intelligence of many of us, including one valued forum member who has developed an excellent Linux program, apparently because you feel that Linux is inferior because of your expectation that it should work like Windows. That's like saying the internal combustion engine is inferior to steam engines because they don't work the same way.

Linux Mint Forums is a platform for users of Linux Mint to come to to give and get help with Linux Mint. It's not a platform for someone who has inappropriate expectations of what Linux should be to come here and rail on Linux and Linux users, especially when that someone's mind is so closed they consistently misinterpret what they have been told.
Jeannie

To ensure the safety of your data, you have to be proactive, not reactive, so, back it up!

OunceofCommonSense
Level 5

Posts: 592
Joined: Mon Oct 01, 2012
Contact:
Contact OunceofCommonSense

Re: Live image backup

- Post by **OunceofCommonSense** » Sat Aug 05, 2023

Timeshift can make an OS image, dare I say backup, while the OS is running. It is possible although most advise against this to back up the Home partition at the same time. I do this in scheduled backups while still using the Mint OS; it runs in the background. One note I have thunderbird profile and email folders in a separate drive than Home. Also it is important to back up using Timeshift to a separate partition or better still drive, from root and home or you will likely run into problems with available space/ I do back up home partition as well as root this way.
And I will likely be scolded now and be told Timeshift is not a backup tool but a restore tool. I am not sure the distinction matters much
MB: Gigabyte model: B650M AORUS ELITE AX Memory: Corsair Low Profile Vengeance 32.00 GB. CPU Ryzen7600x Platform: x86_64 Distribution: Linux Mint 21.2

rickNS

Level 8

Posts: 2388
Joined: Tue Jan 25, 2011
Contact:
Contact rickNS

Re: Live image backup

- Post by **rickNS** » Sat Aug 05, 2023

Lefty wrote: ⇗Sat Aug 05, 2023
What "customers" nearly all distributions of Linux are FREE to download, and install on as many machines as you like.
What does free have anything to do with anything here?
It has everything to do with it, you wrote customers, like you bought something, and going on as if Linux owes you something...which it does not.
So I should stop making images with Windows backup on my wife's NUC with Win7Pro?
Yes, definitely. You "should" move on to an OS which is not dead.
Oh, so Windows users are dumb for having all the stuff that improves their productivity?
Just how does constantly creating unnecessary images of your system increase your productivity ?(which is the topic) It does not, just a waste of resources, and disk space. As @AndyMH said in the third reply a backup image every few months is plenty.

It is quite clear at this point your a very argumentative person, your arguments non-valid.

Now I'll ask you a rhetorical question, do you think those in charge of google, twitter, facebook, amazon, NASA, US military, New York Stock Exchange, etc., etc. are dumb, or "smarter people" ? They all use Linux.
Mint 20.0, and 21.0 MATE on Thinkpads, 3 X T420, T450, T470, and X200

Lefty

Level 1

Posts: 22
Joined: Sun Jul 23, 2023 9:56 am
Contact:
Contact Lefty

Re: Live image backup

• • • Post by **Lefty** » Sat Aug 05, 2023 12:45 pm

If you actually _read_ what I wrote I never disparaged anyone. I just expressed a disappointment in not being able to find software to do something relatively simple. Not enter into a debate whether this was something valid or necessary or not. I will decide that.

Your question is ID10Tic and does not deserve an answer.
I am really tired of all of this, and you all have succeeded in driving me away. So Congrats, I'm sure your mother's are proud.

Re: Live image backup

• Post by **OunceofCommonSense** » Sat Aug 05, 2023

@ Lefty see above.Give Timeshift a try it does what you want
MB: Gigabyte model: B650M AORUS ELITE AX Memory: Corsair Low Profile Vengeance 32.00 GB.
CPU Ryzen7600x Platform: x86_64 Distribution: Linux Mint 21.2

AndyMH

Level 20

Posts: 12332
Joined: Fri Mar 04, 2016
Location: Wiltshire
Contact:
Contact AndyMH

Re: Live image backup

- Post by **AndyMH** » Sat Aug 05, 2023

Lefty wrote: ⤴Sat Aug 05, 2023 12:45 pm I just expressed a disappointment
In that case you have a strange way of expressing your disappointment.

I'm the foxclone dev. An image backup utility that has attracted praise from a lot of users but in your eyes apparently not fit for purpose. And not just me, but others like the rescuezilla dev, who on one level is a competitor but also someone I count as a friend. Did you not stop, just for one minute, and think if this was easy it would have been implemented years ago? You have no understanding of the OS or the underlying complexities of the filesystems it uses. What may be possible in windows with its API and filesystems is not in linux, or at the very least exceptionally difficult. The same is true in reverse in other areas. That is why you will not find a single linux desktop image backup utility that will backup a live filesystem. You might find it in enterprise solutions like bacula and veeam, good luck, you will need a lot of linux-fu.

You also seem to have a problem with entering your password to install software or edit a system config file. The security model in linux is one of the major reasons why malware is extremely rare. That is why you don't need antivirus in linux. You would rather have the ability to install/change anything without hindrance. Looking over the wall at virus ridden windows, no thank you. One area where a windows/linux comparison fails, linux wins hands up. Want to avoid a password, can you do it - yes, am I going to tell you how, no, it would be irresponsible.

30 years windows experience means nothing, I can raise and trump you on that. As you have been told, linux is NOT windows. If you want to continue with linux you need to change your expectations and start again, certainly with significant attitude adjustment.
You are leaving, good, but don't try and play victim. You won't be missed, we can do without people with your attitude.
Thinkcentre M720Q - LM21.2 cinnamon, 4 x T430 - LM21.2 cinnamon, Homebrew desktop i5-8400+GTX1080 Cinnamon 19.0

Lefty

Level 1

Posts: 23
Joined: Sun Jul 23, 2023
Contact:
Contact Lefty

Re: Live image backup

• • • Post by **Lefty** » Sat Aug 05, 2023

My understanding of foxclone is that it does not meet my criterion. let me know if I am wrong.
Live image backup of multiple drives to a network or external drive
A scheduling utility to run unattended
the ability to restore individual files from the image

These are _my_ criteria. I expressed apportionment in both the fact that I cannot manage to find software that meets these, but also in the defeatist attitude and vitriol I have discovered here in my quest for answers. I am a 71 year old man with 30 plus years of computer experience and I don't want to be told that my requirements are not valid, or that I should use some less comprehensive workaround.

It just so happens that Windows backup does this, Norton Ghost does this and probably many others.
It is also possible that Mac OS does this, but I don't know.

It is always too hard to do until someone does it. A defeatist attitude will certainly NOT get it done.

I am not a victim or playing one. There are those on this forum who project their behaviors onto me.
I do want you all to consider the behavior that led me to leave.

Re: Live image backup

Post by **AndyMH** » Sat Aug 05, 2023

Lefty wrote: ⇗Sat Aug 05, 2023 2:20 pm It is always too hard to do until someone does it. A defeatist attitude will certainly NOT get it done.
Couldn't agree more, so I suggest you get out there and fill that gap in the market. There is nothing in linux that meets your needs, so develop it. That's what I did with foxclone. And don't play the age card, I am also 71 years old.
Thinkcentre M720Q - LM21.2 cinnamon, 4 x T430 - LM21.2 cinnamon, Homebrew desktop i5-8400+GTX1080 Cinnamon 19.0

SMG

Level 25

Posts: 25510
Joined: Sun Jul 26, 2020 5:15 pm
Location: USA
Contact:
Contact SMG

Re: Live image backup

Unread post by **SMG** » Sat Aug 05, 2023 2:34 pm

Moderator note: Topic temporarily locked while under review.

So this is where the Mod apparently stepped in to end this behavior.

Really the retort to me expressing my experience as a way of validating my criterion, is “playing the age card”?

And the retort to not being able to find the right software is “go write you own”?

Again, Sheesh!

Reddit Forums

How do you backup a Penguin?

1

level 4
N0stis
Op

Ok, I have another question.

I am looking for software for Linux Mint that will:

Do a live image backup of multiple drives (partitions) to a network or external drive
A scheduling utility to run unattended
The ability to restore individual files from the image

Nothing I have found so will do these things.

1

level 5
hmischuk

a million years ago I used to use `scp` as a cron job.

1

level 6
N0stis
Op

I don't know what that means, sorry.

I am looking at R-Studio now. It's paid, but looks ok so far. What do you think?

Btw, doing all these updates in Linux and not rebooting is really weird to a recovering Windows user.

What follows below just adds to the weirdness of the Linux environment. Either these people are obtuse, dense, don't know what they are talking about, or all of the above.

-------- Original Message --------
Subject: Support Request 2023-08-06 10:59:28
Date: 2023-08-06 09:59
From: support@r-tt.com
To: n0stis@tcw.org
Dear Lefty Insider
Your support request has been placed in a queue Sun Aug 6 10:59:28 2023 and will be processed in a priority sequence.
The reference number for the request is: 2023-08-06 10:59:28
This is related to your problem:
I am a relatively new user of Linux, and am looking for an imaging system similar to Norton Ghost which I have used in Windows for many years.
I am using Linux Mint Victoria Cinnamon 21.2.
I need a solution that does scheduled, 3am, live backups of multiple drives and partitions to a network or USB drive.
It should also allow for the recovery of individual files from the image.
Can R-Studio for Linux do these things?
Thanks,
Lefty

Best regards,
R-tools Technology Inc.
Technical Support

-------- Original Message --------
Subject: Support Request 2023-08-06 10:59:28
Date: 2023-08-06 13:11
From: R-TT Support Team <support@r-tt.com>
To: "Lefty Insider" <n0stis@tcw.org>
Hello Lefty,
Thank you very much for your interest in our software.

R-Studio is a data recovery tool but not cloning/data backup one.
We would recommend you to download and install a free 30-day fully functional trial version of R-Drive Image and check whether it works for you.
The latest build of R-Drive Image can be downloaded from http://www.drive-image.com/Drive_Image_Download.shtml
You may try to use R-Drive Image bootable version to deal with Linux OS.
Please let us know if you have any questions.
Best regards,
Support Team

Support,
You really did not answer my questions, or is the absence of an answer, an actual answer?
Scheduled backups cannot be done from an external bootable drive right?
So I am convinced that this is not the right tool, especially for $80.
Lefty

-------- Original Message --------
Subject: Support Request 2023-08-06 10:59:28
Date: 2023-08-06 20:55
From: R-TT Support Team <support@r-tt.com>
To: "n0stis@tcw.org" <n0stis@tcw.org>
Hello,
If you need a backup software that runs on Linux and has scheduled tasks then R-Drive Image is **not an option here**. R-Drive Image runs only on Windows OS.
Best regards,
Support Team

Maybe instead of asking about imaging software, I should ask about a reasonable solution to a likely future problem.

So after an arduous installation process and using a strange, unfamiliar, unmemorable, and mostly undiscoverable graphical user interface configuration, and throw in some obscure terminal commands, I have managed to get my computer system setup just the way I think that I want it…and then the hard disk fails. Remember Linux Mint 21.2 Victoria Cinnamon Edition would not allow a BIOS RAID1 mirror install. What do I do then? Start over from scratch with a USB boot stick? Remember in the meantime I have installed dozens of OS updates it requested I do over the course of a week, a month, a year. Installed many software applications via the Software Manager, configured the web browser, email client, application software, etc.

In a scenario where my boot hard disk fails and the computer will no longer boot up. What do I do? Will Timeshift, stored on another drive replicate my previous boot partition fully, or just the OS and I need another backup solution for files, other partitions and drives? After I install the new hard disk, I will need to reinstall the OS in virgin form and then use Timeshift to overwrite it and restore my original setting and programs?

I dare not use this preamble to the question however for fear of offending some of the zealots (snipers) who take everything they see or read as potentially personally derogatory and aimed at them and their way of life.

I am looking for software for Linux Mint

.Sorry, this post has been removed by the moderators of r/softwaretesting.
Moderators remove posts from feeds for a variety of reasons, including keeping communities safe, civil, and true to their purpose.

I am looking for software for Linux Mint that will:

Do an active image backup of multiple drives (partitions) to a network and external drives
A scheduling utility to run unattended
The ability to restore individual files from the image

Nothing I have found so far will do these things.

Ideas anyone?

4 comments
Comment as N0stis

level 1
ToddBradley

My first thought was...

1. rsync
2. cron
3. built in to rsync

...but then I realized I don't know what you mean by "image backup". Do you mean making a copy of the whole device image, like using dd?

1

level 2
N0stis
Op

bit-by-bit copies of every sector on all partitions and drives to network or usb drive on a scheduled basis.

Must use an active drive like Timeshift does.

1

level 3
ToddBradley

Good luck

level 1
ocnarf
· 21 hr. ago

Not the subreddit for this. Ask r/linux/

Ok, r/linux is too general and they would tell me to post somewhere else. Linux software is blocked due to Mod protests.

So that was helpful, NOT.

Linux newbie hard disk question

1 post • Page **1** of **1**
Lefty

Level 1

Posts: 19
Joined: Sun Jul 23, 2023
Contact:
Contact Lefty

Linux newbie hard disk question

• • • Post by **Lefty** » Fri Aug 04, 2023

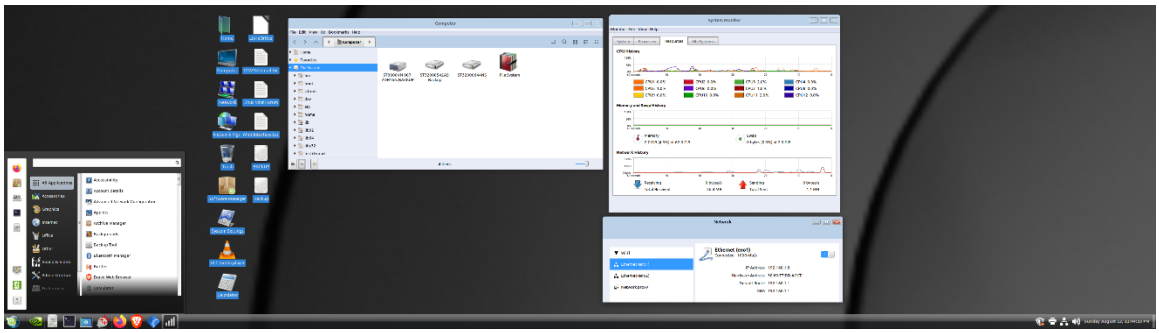
Why no pie chart on the system drive?
http://www.tcw.org/Minty backup drive.png
http://www.tcw.org/Minty OS drive.png
Also why does it take so long to enumerate a drive's contents when selecting properties? I thought it would just do this the first time, but it does it every time. Why doesn't it cache these results and just update them?

Meanwhile I discovered that it is possible to render your Linux Mint system unbootable with a wrong mouse Config setting. Hours were spent in research, many commands only work on certain version of Linux, and some not at all. Holding Left Shift or repeatedly hitting the

Esc key didn't get me into Recovery (Safe() mode. Eventually I booted to my USB install stick and after fighting for permissions on a machine that I am the admin on, got the file changed and saved and all is well. Until the next time.

I did get the KVM to work by adding a EDID emulator, and got the mouse to work by making a config that set the demon button as scroll rather than Back. So I really didn't need to disable it and gained web page scrolling in the process…which is nice.

Meanwhile, I made some improvements to the interface.



https://www.tcw.org/ Linux can be what you want it to be.png

What you see below is Lefty on Reddit as N0stis, as in arister0s n0stis or Lefty Insider, from my books three and four, in the language of Geek Greek.

About Community

r/linux

Welcome to /r/Linux! This is a community for sharing news about Linux, interesting developments and press. If you're looking for tech support, /r/Linux4Noobs is a friendly community that can help you. Please also check out: https://lemmy.ml/c/linux and Kbin.social/m/Linux Please refrain from posting help requests here, cheers.

Created Jan 25, 2008

874k Members

673 Online

Top 1% Ranked by Size

The Entomology of Killer App

A killer application (often shortened to killer app) is any software that is so necessary or desirable that it proves the core value of some larger technology, such as its host computer hardware, video game console, software platform, or operating system. Consumers would buy the host platform just to access that application, possibly substantially increasing sales of its host platform.

Examples

VisiCalc was released in 1979, becoming the earliest generally agreed-upon example of a killer application.

Although the term was coined in the late 1980s one of the first retroactively recognized examples of a killer application is the VisiCalc spreadsheet, released in 1979 for the Apple II series computer. Because it was not released for other computers for 12 months, people spent US$100 (equivalent to $400 in 2022) for the software first, then $2,000 to $10,000 on the requisite Apple II. BYTE Magazine wrote in 1980, "VisiCalc is the first program available on a microcomputer that has been responsible for sales of entire systems", and Creative Computing's VisiCalc review is subtitled "reason enough for owning a computer". Others also developed software, such as EasyWriter, for the Apple II first because of its increasing sales.

Lotus 1-2-3 similarly benefited sales of the IBM PC. Noting that computer purchasers did not want PC compatibility as much as compatibility with certain PC software, InfoWorld suggested "let's tell it like it is. Let's not say 'PC compatible', or even 'MS-DOS compatible'. Instead, let's say '1-2-3 compatible'. WordStar became the most popular word processor during much of the 1980s.

https://en.wikipedia.org/wiki/Killer_application

Posted by u/N0stis

What is the Linux "Killer App"?

Alternative OS

Hello,

So I have a dozen or so curated Windows computers, 7/10/11 OS's in multiple form factors, which I use for my daily compute activities. Primarily Win7, as 10/11 are productivity killers.

I am a former Intel Products Dealer (IPD), Microsoft System Builder, Microsoft Partner, Microsoft Authorized Refurbisher (MAR) and have beta tested MS OS's since Win3.0 Video for Windows.

So I have decades of Windows experience, and my Windows 7 computers have very stringent Op/Sec, i.e. no telemetry, no OS updates, alternate MAC's, browser security extensions etc.etc. etc.

I also have a recently built a machine with Linux Mint 21.2 Victoria Cinnamon Edition. Minty

I have installed Brave and Firefox browsers, Proton VPN, various graphic programs, emacs, etc. I have made it look more to my tastes, but I have not yet seen anything that it will do better than my Win7 machines. Not _as_ good, but better. Enough to compensate for the amount of effort this would involve for my computer fleet to be transformed.

I watch a half dozen video podcasts weekly, read the news, both regular and computer geek news daily, I am writing my fifth 400 plus page historical novel in Word, (leanpub.com) I maintain my website, (tcw.org) use Outlook to manage five email accounts, and stream shows and movies daily. Oh, and I do play some digital music for writing background.

I do understand some of the additional security of Linux, forcing sudo and opening as root. But I am not sure it is any more secure than my highly refined Windows 7 machines. There is a theoretical greater malware attack surface with Windows, but I haven't seen any evidence of this in many, many, years. I have used one of these machines effectively on the Dark Web and wrote two books about the experience. So...

- LibreOffice is not MS Office and I doubt it would create my books
- Thunderbird is not Outlook
- Don't see a replacement for Adobe Acrobat or Adobe Creative Suite

There also seems to be quite a bit of Mint telemetry that I have not yet learned to turn off.

So my reasonable request is: what Killer App(s) am I missing?

Why do Linux users say that _smart people_ use Linux?

What would make me abandon Windows and the high productivity levels I have now?

Thanks in advance for any reasonable responses.

PS. Snipers please hold your fire, I am not interested in religious flame wars, just facts and info.

151 comments
18 people here

Post Insights
Only you and mods of this community can see this
14.4k
Total Views
37%
Upvote Rate
-57
Community Karma
1
Total Shares
Comment as N0stis

level 1
kombiwombi

The killer app for Linux is the low systems administrations overhead for fleets of computers.

In looking to the desktop you're looking in the wrong place for Linux's strengths. Which isn't to say that Linux doesn't have a capable desktop, it's just not the main game like it is for Windows.

40

level 2
N0stis
Op

level 1
esaloch

Docker. It’s so easy to run Linux anywhere without worrying about license that almost everyone uses it for their containers

Edit: this is not the killer app that you personally need though

20

level 2
N0stis
Op

level 1
G3m1nu5

Yeah, I'm not feeding this troll today.

17
level 1
imzieris

For me killer feature is that I'm in total control over my system. Can remove or change many components as I please. Keeping system up to date is breeze. In my experience maintaining old systems is nightmare.

13

level 2
soltesza

Also, there are rolling release distros which never need reinstall for a new release (as opposed to LTS style OSes like Ubuntu or Windows)

5

level 1
Drate_Otin

I'll be honest this feels like a troll post. Your list of credentials, the subtle sarcasm and baiting

So my reasonable request is: what Killer App(s) I am missing?

Why do Linux users say that *smart people* use Linux?

I would not call that a "reasonable request" so much as an expression of a very specific view on what an operating system is for. And *smart people* use what gets the job done.

I use Linux because of the host of completely free software options like Linux KVM for virtualization, mtr for traceroute, a load of terminal applications and shells with various and sundry benefits, nmcli and generally easy access to networking capabilities that are important to me, service administration (whether through systemd or initd), fail2ban... The list goes on.

I also use it because it tends to run far better on older/any hardware. I just had to reinstall Windows on this stupid laptop (exclusively for a single customer presentation and one highly obscure app) and the fan runs constantly. Uber Debian this thing was silent most of the time. And I originally put Debian on it because Windows was failing me for a networking task regarding multicast.

I use it because I both like it and find it extremely useful in the world in which I work.

12

level 2
jonnyman9

Ya same here. The development experience is fantastic. Awk and sed and grep out of the box. Compilers and tons of languages and runtimes that are easy to install. Docker/podman that work so well. I know OP is not a developer and someone else said it, but if you like windows and are productive in it cool, keep using it. But for me having done software development in linux and windows, its linux all the way.

4

level 2
N0stis
Op

level 1
throwaway6560192

A lot (most?) Linux apps tend to be cross-platform, so they can't really be "killer" in the ordinary sense.

That said...

Why do Linux users say that *smart people* use Linux?

I would not make that statement generally. There are usecases where Windows is genuinely just better. Personally, I would choose to use Linux for the desktop but use Windows apps through a VM or something in many of these situations, but I recognize that's not ideal for everyone. However it's an option you can consider.

I will briefly state why I prefer it. For my work (programming), Linux is in my experience easier to work with, has great tool support. I like my desktop environment, it provides a lot of tiny features and quality of life things that individually are minor but together make me prefer it — I suppose that's a "killer" app, in the sense that it doesn't run on Windows. I also appreciate free and open source software wherever possible.

So I have a dozen or so curated Windows computers, 7/10/11 OS's in multiple form factors, which I use for my daily compute activities. Primarily Win7, as 10/11 are productivity killers. [...] So I have decades of Windows experience, and my Windows 7 computers have very stringent Op/Sec, i.e. no telemetry, no OS updates, alternate MAC's, browser security extensions etc.etc. etc.

How sustainable is that going to be? Windows 7 is already EOL. It will probably not be possible to run it forever as new exploits keep getting discovered and left unfixed, and new software increasingly doesn't bother to support it.

In such a situation, Linux (combined with some VMs for those unreplaceable apps) through its customizability and variety of choice, can provide a system where you can keep your workflow and productivity, but not have to use outdated and unsupported foundations for it.

level 1
commodore512

killer app for what?

For servers, it was a barebones system to run Apache.

For Windows 7 Refugees, it's the most viable alternative.

It depends on the individual. I still use Windows, but I treat my Windows 10 like it's a Video Game Console or a retro computer. Yes, I consider even supported versions of Windows to be a retro computing platform, I consider the EOL date their graduation. When Windows is EOL, it's complete, it will never update again and extensions won't break.

Me personally, I miss the days when your computer left you alone and got out of your way.

11

level 1
ro55mo

Windows 7 support ended on January 14 2020

- https://support.microsoft.com/en-us/windows/windows-7-support-ended-on-january-14-2020-b75d4580-2cc7-895a-2c9c-1466d9a53962

I can't find anything about telemetry in Mint. The linked privacy policy is about the website and donations.

- https://linuxmint.com/privacy.php

It is possible other programs you install might gather information.

- https://forums.linuxmint.com/viewtopic.php?t=391705

The killer features of Linux are freedom, privacy and transparency. This depends on this distro you use of course.

This is a good summary.

- https://www.debian.org/intro/free
- https://www.debian.org/intro/philosophy
- https://www.debian.org/social_contract

I don't what is involved in writing a book but I am happy writing documentation in markdown which can be done in dozens of very minimal and simple apps.

LibreOffice is ok but yes, the MS Office suite is better.

I know some people need the Adobe Suite but paying a subscription for software is a deal breaker. I am happy to pay a one off cost. Hell I bought WinRAR back in the day.

I am a Linux user and all I say to people is use what works for you. I have no desire to convert or talk down to people over their choices.

Honestly I prefer Thunderbird to Outlook. Its less confusing.

Sadly MS are turning their OS into a subscription service where you rent it rather than own it. This and the constant info gathering and advertising mean I won't touch Windows in its current form.

I like and enjoy Linux on the desktop but running as a headless server is its other killer feature. MS even tried to copy this with mixed success with Server Core. Seems very few people outside MS developed anything for it though. They even finally got round to copying the software repo model with both a web store and the winget command.

If you are happy on (unsupported) Windows I am not going to try and convince you otherwise.

10

level 2
N0stis
Op

I know some people need the Adobe Suite but paying a subscription for software is a deal breaker.

I have no subs and never will.

Not looking for anyone to convince me of anything.

Am just looking to see if I missed some programs that would make the switch worthwhile.

-1

level 1
globulous9

I don't have to deal with a product activation process with linux. There's the killer app. I don't care how easy it is, or whether I can get a key from school, or any of this shit. I just install it and it runs.

To your other points

- We have better tools for writing books. One of Unix's first tasks was typesetting at AT&T. Things have only got better. People are writing books with groff, LaTeX, and the GUI frontends that have been developed for that class of work. Nothing wrong with using Office to do it, but no, that's not going to work as well here.
- Thunderbird is not Outlook. Evolution is. We don't have an Exchange equivalent, but lots of companies claim to.
- I don't even know what people do with Acrobat, but pdf handling tools are rich, varied, and mature. There's not one program to replace a suite, but there are a metric shitload of graphical, typesetting, desktop publishing, video editing, DAWs, and other creative tools which don't require subscription fees.

You've put forty years into learning Windows. Unless you want to put serious time into learning Linux, you'll never be as productive. That's okay. It's the same reason you label newer Windows versions "productivity killers." I don't use Windows, but some people in my family do, and I can't tell 7 from 8 from 10 from 11. It all looks the same to me, so my productivity isn't going to be different among different versions. I don't have the investment you do.

31

level 2
Mooks79

I’m not sure I concur with your first point. LaTeX works fine on windows in my experience. Used linux to write my PhD thesis and now work windows for anything work related. Have barely noticed a difference. Certainly not any difference sufficient to claim it as a killer app.

5

level 3
globulous9

LaTeX does work fine on Windows. MS Office, however, does not run on Linux. So there are better choices than Office for writing a book on Linux. Sorry if I worded that confusingly.

Yes, yes, I know WINE exists, and often even works these days. That's a distraction from my point.

8

level 4
coldblade2000

WINE can only really run pretty old versions of Office, certainly not Office 365 modern versions

2

level 4
zupobaloop

Something a lot of people seem to miss, too...

It is absolutely true that MS Office is the industry setting power house suite. When you get into power user or niche corporate use, there is no competition. It's not even close.

However, the vast majority of people are writing essays for school or drawing up resumes. The majority of word processing done by most people can be done in just about ANY word processor. Most people not only *don't* use the added functionality they are paying for (often as a subscription), I would posit that most of them *can't*.

2

level 4
Mooks79

Ah yes, maybe I got the wrong end of the stick then.

1

level 4
Dr_Tron

LaTeX does work fine on Windows. MS Office, however, does not run on Linux. So there are better choices than Office for writing a book on Linux.

The main difference is that Office is a word processor and LaTeX is a typesetting system. And no, nobody would use the former to write a book, unless forced to.

1

level 4
antidense

Only office works great for me. If I have to I will use office365

level 2
N0stis
Op

I don't have to deal with a product activation process with linux

Activation is a minor issue, but thanks for the tips on other software.

I am retired now so I have nothing but time.

1

level 3
globulous9

For some of us, activation is not a minor issue! It's the crux of the decision-making process when engaging with information technology. Do I feel okay with getting permission to use my computer? Do I want to run software provided by an organization who demands that I present my papers when I get a new computer? It's a fundamental philosophical choice. The act may be minor, but the implications are not.

This is of course subjective, and taking this lightly is a perfectly valid decision, but for me, the product keys of Windows 9x gave way to the "plug into the internet and prove you deserve this software" activation process of Windows XP, and that's where I got off the ride.

17

level 4
N0stis
Op

Well I am not a systems administrator and from my message you could discern that I was speaking as an individual computer user.

-3
level 5
sidusnare

The philosophical choice is irrelevant between a systems administrator and a individual computer user.

I think you're missing the point here, "activation" is more than the technical process of going through the steps. It is about privacy, it is about ownership, it is about having your own computer being combative with you, and an agent against you.

6

level 5
globulous9

I didn't say anything about systems administration, and from my message you could discern that I am also an individual computer user. Not sure what your point is here.

4
level 3
sidusnare

Activation is a minor issue

It's not. Not in the least. It's at the **core** of the difference. With Windows, I have to trust that Microsoft did a good job, without being able to confirm that. I have no way to find out why something isn't working the way I'd expect it to, and even less recourse to correct it. If Windows is ever open sourced, I might consider it a decade later.

We're FOSS people here, and we're never going to be happy running code we can't see. If you can't see the merits of open source over closed source, we're never going to have a meeting of the minds, we're living in two different worlds.

5

level 4
antidense

It's a lack of flexibility, too. With Linux I can just swap computer parts as I like. With Windows I have to consider how that might affect activation, even if I still intend to use one single install of Windows.

level 1
calvinatorzcraft

BTRFS compression is my fave. Literally just using less storage for the same data is always great.

10

level 2
soltesza

I also like BTRFS subvolumes very much.

The snapshotting capability is also great.

2

level 3

N0stis

Op

Snapshot is great, but I would prefer an entire image copy of the entire drive or drives, on a scheduled, unattended basis like I do with Windows System Image or Ghost in Windows.

-1

level 4

soltesza

BTRFS snapshots is not the entire backup system, it is just a lower-level enabler feature for sophisticated mechanisms like backups (or rollbacks after some breaking install).

You typically use a proper backup tool for your Linux hosts, like Bakula which is capable of utilizing file system snapshots for pixel-perfect, consistent backups.

6

level 4

poemsavvy

Well that already exists. It's called the dd command

4

level 1

bcwagne

For some (many) of us, the killer feature of Linux is that it's not a Microsoft product. Some die hard Linux folks have long memories about what Microsoft did through SCO, etc.

8
level 1
wheresmyflan

It sounds like you've already made your mind up and rejected all the "reasonable responses". If you're as experienced with Windows as you claim to be, just stick with that, Linux isn't for everyone.

level 1
eriksrx

OP, curious about your thoughts regarding macOS for your use case. Do you have experience using it as a daily driver?

6

level 2
N0stis
Op

As a system builder I never used proprietary hardware, except for laptops and even then not always.

I have shied away from anything with a half-eaten piece of fruit on it all my life.

MacOS is only easier to use, if you know how to use it. I refuse to support those who demand 100% profit margins.

Quick story...HOF baseball player Honas Wagner was once asked by a kid if it was hard to be a ballplayer. He said to that kid that there wasn't much to being a ballplayer, if you were a ballplayer.

0
level 3
malsell

MacOS is only easier to use, if you know how to use it. I refuse to support those who demand 100% profit margins.

This is literally MS, Adobe, AutoDesk, et al.'s ideas of howto do business.

6

level 1
AnythingAnthingAnthi

This post seems mis-flaired: the 'alternative' in 'alternative OS' is an alternative to *Linux*.

What is this telemetry that you mention in Linux Mint?

6

level 2
N0stis
Op

Thunderbird and others

-2

level 1
RaspberryPiBen

I don't know what you mean by "Mint telemetry." Linux Mint does not have any telemetry. Some applications might have it, but the OS itself does not.

6

level 1
gargravarr2112

As one of my friends once noted, 'the entire OS is a compiler.'

Out of the box, you have runtimes for C/C++, Perl and Python. Shells such as Bash. Text processing languages such as awk and sed. Programs for transferring files using a dozen different protocols. It's set up for you to *create*.

Windows is a true pain to get to grips with out of the box. It's taken 20 years to get a half-decent command line (and Powershell is its own mess). One of my first tasks on installing an OS is to put Firefox on it. On Windows, you have to resort to IE (or Edge), and click through endless annoying 'Would you like to-?' windows before it lets you have control. If you want to to automate stuff, you have the choice of 2 or 3 Microsoft-proprietary scripting languages (Batch, VBScript, PoSh), none of which feel particularly modern and have extreme limitations. Setting up a Windows machine for me takes *days* to put everything where I want it, while a Linux machine takes *minutes*. Power-user tools are hidden away by default. Developing anything on Windows is pain, pure and simple.

Windows is set up for you to *consume*.

I'd say that's the killer feature of Linux - it may not be the most friendly to a beginner, but it does lay out a vast selection of power tools and tell you 'go figure out how to use them. If you hurt yourself, well, you'll learn quicker, won't you?'

6

level 1
eionmac

The ability to switch operating systems while maintaining the same documents.
I use a couple of Linux operating systems on same computer with shared documents.

The OSs have different objectives, one a 'general' the other a specialised trade tool.

This ability is not available in Windows OS (which I also use for teaching purposes to those who use Windows machines)

4

level 2
N0stis
Op

The ability to switch operating systems while maintaining the same documents.

I guess I don't understand what the use case would be for that.

-3

level 3
eionmac

One system is highly specialise (intense mathematical and calculation sub routines) think like astrophysics / navigation, complex typesetting program; other is a generalised desktop distro , browser, email, video etc.

6

level 1
beermad

Having watched people trying to show presentations using Windows machines, two things that immediately come to mind are:

1. When there's an update, **I** get to choose when it happens. On several occasions I've seen people's Windows machines decide to kick off an update when they needed a stable machine.

2. There's no need for CPU & I/O hungry virus scans. Again, I've seen people's presentations grind to a halt while their antivirus takes their machine over.

I recall from my working days that I had to use Windows for a few things (various Unixes for my core job) and getting anything done on the Windows machine was always just harder work than it would have been on Linux. The time I was tasked with producing some software to run on Windows was an absolute nightmare.

And another biggie for me is security. Although I'm not an IT security person, I listen to a couple of security podcasts and it seems there's hardly a month goes by without one or other bemoaning how some security problem is due to Microsoft's slapdash attitude to security.

5

level 1
throwaway6560192

There also seems to be quite a bit of Mint telemetry that I have not yet learned to turn off.

I must've missed this. Could you elaborate?

6

level 2
N0stis
Op

First of all this was an offhand comment.

What I have seen so far, as a new user:

/var/log/installer/telemetry

Thunderbird opening messages

Snap and flatpak packages, perhaps

linuxmint.com (Google is all over it)

1

level 1
1087-run-it-back

You have declared that EOL is not an issue in the comments so just keep using your windows 7 boxes. Windows 10/11 isn't an option you're willing to consider to because of "productivity", and there is no chance in hell that by switching to linux your productivity will go up, so just don't.

4

level 1
andymaclean19

IMO the 'killer app' for Linux (from a usage POV) is actually the command line and command line tools. If you want to do anything on a command line the experience is just better in Linux. Technically you can have terminals and even a lot of the same Linux utilities in Windows but I've never had the same experience with ease of use, completeness of the command set and ease of installing new tools when needed than in Linux.

You seem to be comparing based on the desktop tools you use. For actual desktop use, most software developed for Linux is open source, which means the technology has been adopted into Windows and is not unique to Linux. For example the Chrome browser was based on Apple's Webkit which, IIRC, was a fork of the KHTML browser for Linux. Sometimes the desktop experience in Linux is not as good as Max/Windows due to the lack of the native apps you'd find there (MS office/teams and the slack app are the ones I miss having daily).

I've been using both Linux and Windows for a long time. Really on the desktop the only reason to use Linux is because you like it or you don't want to use the alternatives (for me it's both). Servers, virtualisation and containers are where Linux really shines.

5

level 1
zupobaloop

I'm not as old as you, nor do I have your level of experience. My professional IT work has been in NFPs or as work study sort of thing.

However, I have had a foot firmly in Windows and Linux for about 2 decades, own and maintain a dozen computers in my home, and about as many outside.

Here are the advantages I see in Linux over Windows:

- A secure base with modern amenities (e.g. web browsers) that will function very well on old hardware. Yes, your niche use Windows 7 machine does this for *some things*, but Mint XFCE can bring an old computer back to life in a stable, secure way.
- Stability in those cases where it's a hardware issue. BSODs are not really the issue Linux users pretend they are, but I have experienced failing RAM (as an example) causing BSODs in Windows... yet Linux could charge on through them. This is another example of repurposing older hardware.

- Package management. There's these broad strokes descriptions of Windows "they have to download EXE or MSI or go to the Windows Store, and it's a mismatched confusing mess." That used to not be true of Linux. You could write a small script that removes whatever bloat and adds whatever software you want, copy it to a new install, and be up and running in minutes. Nowadays, snaps, flats, etc have created a WORSE mismatch in Linux, but at least you can still handle most of your software through the command line.
- Similarly, you have more control over updates. Again, the non-Windows users way over emphasize the troubles associated with updates there, but if you are paying attention, you can wait on updates, focus on security updates, do them when you want to, etc. Some people appreciate that.
- Customizability. Just about every Desktop Manager in Linux thwomps Windows. I have setup "music and writing only" machines for my kids. This is possible in Windows, technically, but it's *easy* in Linux. Not to mention customizing the appearance and ux/ui...
- There are some bits of software I wish were available on Windows that are not. Maybe not killer ones, but... Albert is a better quick launcher than what we have... RhythmBox is an awesome music player... SSH is easier (PuTTY is an OK substitute in Windows, but not to be preferred).
- If you separate your home folder, say on another hard drive, a semi-fresh reinstallation of the OS takes minutes. Think what Windows is TRYING to do with the reset function, but it's been done well for decades on Linux.
- I, like you, don't care about the telemetry and cost of Windows, but some people do appreciate Linux's zero cost high privacy model.

What can Windows do that Linux cannot?

- Software options are second to none. Almost every task I set out to do can be accomplished with a bit of software, often free (or at least cheap), or can be whipped up in Visual Studio in a matter of minutes... in a way that will run well on every Windows setup that has .NET installed. There are MANY things I do in Windows that simply cannot be done in Linux, not in a truly 1:1 fashion. (Mirroring one monitor's output on another, for example). This goes beyond what you mentioned (Exchange, Office, Adobe) and down to just fun techy 'I think my computer should be able to do this...' stuff.
- Hardware options are the same way. More support for more gadgets, just because of the bigger user base.
- Actual stability, more broadly... I use Mint because after a ton of distro hopping over the years, because it's the only one that doesn't destroy itself substantially more often than Windows does. Reinstalling Linux is easier than Windows, but I also found myself doing it a LOT more often until I settled on Mint (which, tbf, puts a huge emphasis on stability).
- Cross-platform ecosystem integration. iCloud for the iPhone users, OneDrive for the Samsung users, native app for digital movie purchases, etc. It's a clunky mess on the Linux side.
- Updates come quicker and are often more meaningful. Feature updates have slowed down, but even now... if you're the sort who gets excited just to see what you can do out of the box now that you couldn't before, you're going to run into that much more often in Windows.
- Storage spaces allows in-OS RAID like functions which (though slower) is more stable than any RAID I've ever used.

For what it's worth, my view on macOS is that it kind of pulls from both columns... e.g. more software options than Linux, but far less hardware than either... command line and package management like Linux, but not at all free. I've owned several Macs over the years, but they all end up with Linux on them sooner or later.

I also included "used to" a few times in here, because I don't think this assessment was as true 5 years ago, and I doubt it will be 5 years from now. The advantages of both have lessened over the years, which is why I think you see such an emphasis now just avoiding corporate greed, telemetry, ads, etc. Most computer users can accomplish whatever they want to accomplish on any OS, so it can be boiled down to a philosophical choice (rather than a practical one).

5

level 2
N0stis
Op

I, like you, don't care about the telemetry and cost of Windows, but some people do appreciate Linux's zero cost high privacy model.

I haven't paid for Windows in 15 years, and I do care about telemetry and have significant Op/Sec to prevent it as I said in the OP.

Thanks for the lengthy post, but it is significantly off topic.

0

level 3
zupobaloop

I meant "don't care" in the more colloquial sense, as in it's not a concern.

Thanks for the lengthy post, but it is significantly off topic.

Nope. You asked:

So my reasonable request is: what Killer App(s) I am missing?

Why do Linux users say that _smart people_ use Linux?

What would make me abandon Windows and the high productivity levels I have now?

I answered each of those questions from my perspective.

Sure, you didn't ask for what might *keep* you in Windows, but I think any honest discussion about switching (or using both) benefits from those counter positive claims.

So now I guess I'm not sure if you came here in earnest looking for actual answers, but that's okay. Maybe someone else will benefit from the thread.

level 1
talkingBird2345

For nearly every daily task, there is a perfect tool written for Linux and what this is depends on your preferences. All you need is the time and energy to experience and learn how to use them and you may very well end up with a way better workflow then would ever be possible on windows.

3

level 2
N0stis
Op

Well that was my assumption and why I asked the question, which has not to this point been answered.

0

level 3
talkingBird2345

Because there is no generic answer. It always depends on the users preferences and workflow.

For example Vim is an amazing text editor that can serve a lot of proposes like being an IDE and lots of other things. If these things are what you are spending most of your time doing, it is worth to invest the time into this tool and learn how to use it effectively. But if all you want is a generic text editor you open one a month, it will likely be a waste of time and not the right tool.

3
level 1
sidusnare

The OS makes more sense. It's better laid out, more flexible, more customizable. It's easy to make it do exactly what I want it to do and not do what I don't want it to do. Almost everything is a web page now, more and more I care less and less about native Windows apps. I can run Chrome on anything so I run it on Gentoo.

You're thinking backwards. Killer app? No, start with a good foundation and build up from there.

What would make me abandon Windows

It sounds like you've invested a lot of time in gaining proficiency in Windows, and have decided to accept the dictates of commercial coders and marketing based design choices. Why *would* you abandon Windows?

Personally, I loathe Windows from a UI/UX design and OS design perspective, and Microsoft as a company.

Professionally, I have my own AD cluster in VMs, I include Windows when running QA, I manage Windows servers for my employer. I also have Macintosh on Intel and Apple silicon (actually on PPC and M68k too, but that's more of a hobby). Professionally, I use Linux to make my life easier in the tasks at hand, I fit the system to my habits and code to my ease of use.

Professionals use the right tool for the job, and it sounds like you'll be most effective with Windows.

If you use Linux enough to raise to an equal level of proficiency, I don't think you'll need to ask why it's preferred.

5

level 1
lisploli

Why do Linux users say that smart people use Linux?

Because we are smart. Isn't that obvious?

What would make me abandon Windows

Hard to tell, without knowing what's on your mind. The usual procedure is to look what others do with it, but you seem rather dismissive of any use case which is not your own. It sure would ease communication if you would write down what you actually want, instead of having us guessing.

What would motivate me to make you abandon Windows?

3

level 2
N0stis
Op

If you go back and read the OP _before_ you start typing, you might learn something.

-2

level 1
TiZ_EX1

A little bit of the wording here is a bit provocative, but I do believe you're asking in good faith, and I believe you may have been a little mislead by some overzealous evangelists.

So like... first of all, any Linux user who tells you that "smart people use Linux" is up their own ass. Linux is not *inherently* harder than Windows. It's just *different.* The way it does things, and the way you do things in it, may click better with you than Windows's ways. Or it may not at all! There is no value judgment to be had in that. It is *good* for Windows and Linux to coexist so that people have different paths toward a comfortable computing experience.

Let's go ahead and answer your question: Linux does not really have a killer app. The differing experiences in Linux are most likely going to be the "killer app" for you. Let me elaborate. When you try out a Linux live environment, and boot into the GUI, start poking around and doing things, you may feel like the workflow is nicer, or looks better, or just feels good, or any combination of those factors and others. Using workspaces as a main, front-and-center feature--as opposed to how it's hidden and clunky on Windows--might be one of those features that changes your life.

And then you may install it, and when you find that the process differs from Windows, you may like it better. And then you may install applications and components, and you may find that you like the way that works more. You might enjoy that you only have to reboot if you do a kernel upgrade. You might enjoy that if you keep a list of added and removed packages, you can quickly reconfigure any freshly installed base system. Or maybe that you can keep a separate `/home` partition to easily keep your data between different Linux installations. Or maybe that if you install an app from the app store in the "user" installation, it will also keep between different Linux installations. You might realize that the fact that many Linux applications are GUIs that have command line equivalents means you can use scripting to automate *a lot* of stuff, *even GUI actions.* You might like that the BTRFS filesystem lets you take the partitioning strategy to the next level; instead of partitions, you've got subvolumes, snapshots, transparent compression, and deduplication. I could go on.

Your screenshot of Mint looks like you have gone to very painstaking lengths to make it look like Windows between Vista and 7. And so this makes me wonder if you are anchored too firmly in your expectations for things to work like Windows, and how that affects your willingness to consider whether the things that work *differently* are better or worse for you. The comfort zone factor is very real and very valid, of course. So try to shed value judgments, and ask yourself honestly which things you prefer in Windows, and which things you prefer in Linux. You may be able to find workarounds in Windows for the things you like better in Linux, and vice versa. And if you feel like all the things that are different in Linux are just more troublesome for you, *that really is okay!* Like you said, your productivity level is already high. You don't need to fix what isn't broken.

Most of us who are here aren't here because of any particular "killer app." We really don't have one, lol. We're here because the *fundamental experience* agrees with us better than the alternatives.

5

level 2

N0stis

Op

Thanks for the lengthy response, but you mostly talk about OS manipulation.

That is of little concern to me, beyond the user interface.

I am a fan of the skeuomorphic interface elements, where things look like what they actually are in our 3D world. You can call it Vista if you like, but it could also be a Tesla display, or signage, or games, or even other non-computer related items. I hate the flat *Modern* look of an OS as much as I do in a kitchen or living room.

I think that the current generation has been duped into accepting and liking it. The corporate focus has been on a lightweight easy to code language like xaml that worked in low memory on phones and pretend computers like ipads. This is much easier than doing the hard C++ coding it takes to make real application software programs, rather than Apps. When I first heard this I thought they were talking about appetizers at Applebee's. We used to have some really good ones, like Ventura Publisher, Micrographx Designer, 3D Studio Max, etc.

This is all part of a larger corporate plan to run these Apps and OS's from the cloud (their computers) for monthly subscriptions. They can sell you the same thing, over and over again.

As Tom Petty sang, they want to know how much you will pay for what you used to get for free. (or at a low cost)

0

level 1
aesfields

> So my reasonable request is: what Killer App(s) I am missing?
BASH, as a start. The choice of a desktop environment.

> Why do Linux users say that _smart people_ use Linux?
Nobody says this.

>What would make me abandon Windows and the high productivity levels I have now?
Use whatever you like, no one is forcing you to abandon Windows if you are happy with it.

May I ask, how old you are?

3

level 2
N0stis
Op

> Why do Linux users say that _smart people_ use Linux?

Nobody says this.

Have a look in the Linux Mint sub.

Again, if you look at the OP, I simply asked a question, and asked not to be sniped. That failed twice with you.

Age? Old enough to know better, but too young to resist!

Actually, old enough to remember when Michael Jackson was black, when President Ford fell down a lot, when Nixon was our only criminal president, and when 50k plus of my generation died for nothing in Vietnam.

-2

level 1
xoteonlinux

rsync

There is nothing more to say.

4

level 2
N0stis
Op

rsync

Can rsync make a block by block image of my machine to a usb external drive, or a NAS?

I don't believe so, but could be wrong.

Even if it can is just duplicates what Windows Image or Norton Ghost or others already do. Not a killer app.

-2

level 3
xoteonlinux

rsync can make incremental snapshots. I am not coping the whole image of e. g. my fileserver, all it transmits is the delta of my data on the filesystem.

Killer app, definitely.

level 3
dve-

The killer feature of rsync is that it only transfers the changes and not the whole partition. It is super fast super reliable and at the same time incredibly small and lightweight. It's a swiss army knife that fits in every pocket, and the alternatives you answered are like worse knives that are bigger.

Installing a bloated, third party proprietary binary software like Norton Ghost, no thanks.

I am faster on my bike to commute to work, I don't want to buy a Hummer for that that also needs a huge Garage and is slower to get to work.

level 1
poemsavvy

Linux *is* the killer app.

level 1
sidusnare

One core difference that informs so much more: Linux can delete and open file.

Sounds simple? Hardly worth noting? Well, it really *really* makes the update process faster, easier, more efficient, and more stable. "Oh no, vbrun300.dll is being used, we better reboot three times so a boothook script can snatch it around while nobody is looking!"

3

level 1
Vlad_the_Mage

I don't think there is one killer app, but a killer ecosystem.

The combination of a shell (bash/zsh), a package manager and software repos, the filesystem hierarchy, and an init system (systemd) gives an infinitely better experience to users and system administrators than the system of batch/powershell/gui interfaces, online installer downloads, and whatever is happening with windows services and the registry.

4

level 1
redddcrow

fact: Microsoft and Adobe have to interest in porting their apps to Linux so that's why their not there.

2

level 1
zam0th

What would make me abandon Windows and the high productivity levels I have now?

Nothing. Even though managing end-user linux machines is easy with Chef/Puppet or maybe even Ansible, none of that comes close to the combined power of MSAD and MSSC and automated stuff you could centrally provision with a click of a button. *This* is the blocking issue, not supposed lack of applied programs (ffs, stop using the bullshit "app" word, you're not talking about ios) or some user functionality.

And as i've been saying for decades, linux is not a *professional* or *corporate* desktop environment [yet] and it should not be understood as such just because some dudes on the internet managed to run Steam and some games with wine on it and patched KDE2 for FreeBSD (c).

Feel free to use Windows ecosystem where it's best - end-user experience, and Linux ecosystem where it's best - server workload execution platform.

2

level 1
X547

Docker.

level 2
N0stis
Op

Docker.

Off topic!

0

level 3
X547

If you are asking about GUI apps, it can be no GUI killer-apps on Linux because nearly all GUI apps are cross-platform and also run on Windows, Mac OS, *BSD etc..

For example you can use Libre Office on Windows without problem.

level 1
Metataphysika

I want to say as an exclusive Linux user (except when I must use Windows-compatible software on a VM), that I totally appreciate your question and I'm very annoyed to find you voted down. Why should those of us who prefer Linux give you downvotes for asking totally reasonable critical questions?

Windows 7 was the best Windows ever, period. I'm glad you have made it work for you.

I would say that for your purposes, Windows 7 may be best for you. The reasons I prefer Linux (in no particular order) are 1) I trust it more because a massive community is able to monitor its source code, so as an "average" user I don't have to worry about hidden malware, 2) I hate the limitations of a point and click environment controlled by MS -- GNU/Linux CLIs (mostly BASH) give you a level of control and programmability that is way beyond Windows, 3) a wide array of desktop choices, 4) massive repositories of trustworthy open source software that is free in every sense and monitored in a fairly centralized way, and which is incredibly useful for achieving virtually anything, and highly versatile and programmable.

In short, I can't imagine the horror of going back to Windows and giving up all of this, except when I have to use Adobe products for example.

Regarding LibreOffice: Yes, you can typeset books with it.

level 2
N0stis
Op

Windows 7 was the best Windows ever, period.

We share this belief and I have the final PC Mag print cover featuring Win7 framed on my office wall.

I don't care about any votes. I am just trying to extract some information from those with knowledge in a flaming sea of MALA zealots.

1
level 1
redddcrow

...let me grab some popcorn

level 2
N0stis
Op

I recognize that phrase as legacy Reddit having read the “We are the nerds” book.

1

level 2
Broken_Canoe

Oh you've got to see the website linked in the main post to see how thoroughly unhinged this one is.

level 1
Annual-Advisor-7916

LibreOffice is not MS Office and I doubt it would create my books

Writing books in Office? Eww. LaTeX is literally made for this.

Thunderbird is not Outlook

There are millions of mail clients out there, chose one you like.

Don't see a replacement for Adobe Acrobat or Adobe Creative Suite

https://www.reddit.com/r/linuxadmin/comments/e6yyyl/acrobat_alternative_for_linux/

All in all basing a OS decision over these three programms is not really reasonable.

5

level 2
N0stis
Op

Again, please reread my OP, more slowly this time.

-4

level 1
lurch99

VIM

1

level 1
No-Theme-2557

The low resource consumption of Linux makes it a great choice for old or low-end machines. You can breathe new life into an old machine by installing Linux on it. And, if you are on a tight budget, you can buy a low-end machine and install Linux on it to save money.

For example, you can run a basic Linux distribution on a machine with as little as 256MB of RAM. This means that you can use Linux on a very old laptop or even a Raspberry Pi.

Once you have Linux installed on your low-end machine, you can then install a web browser and use it to run web-based versions of Microsoft Office, Outlook, and Adobe applications. This means that you can have access to many of the same productivity tools that you would have on a Windows or macOS machine, but without having to spend a lot of money on hardware.

The killer app is saving money.

2

level 2
N0stis
Op

Off topic!

1

level 3
Broken_Canoe

Are you intentionally being abrasive, obtuse and downright rude to everyone who is trying to respond and support your incredibly verbose and borderline idiosyncratic approach to computing?

Having plenty of time on your hands doesn't automatically give you the right to be an asshole.

level 1
Big-Philosopher-3544

LibreOffice is not MS Office and I doubt it would create my books

I prefer it, it would create anything you wanted and open your doc files. Someone else mentioned Latex, you could also just use office online

Thunderbird is not Outlook

Supposed to be getting an upgrade soon, I use Evolution though

Don't see a replacement for Adobe Acrobat or Adobe Creative Suite

What do you need these for? You can view/edit pdfs in Firefox, Krita, Gimp, Pinta and Inkscape cover imagery. The list goes on for whatever your use case is

Why do Linux users say that *smart people* use Linux?

I haven't heard that but; it's faster, it's simpler, and it contributes to the notion of what computers are supposed to be (open source)

You mentioned not using mac because the hardware is proprietary. I don't really see where you're getting open source hardware from but why is proprietary hardware bad to you but software isn't?

My "killer app" is the desktop, the only time I thought Windows was decent in this regard was 8/8.1, and they downgraded right after that. There was a time where I was running a bunch of 3rd party programs on top of Windows to try and make the desktop into something I prefer but that just multiplies how slow it is and it's prone to break. "As of October 2021, Windows 11 doesn't let you move your taskbar to the top of the screen" (really anywhere but the bottom) Why would I want that option gone? If my desktop decided to make a change I didn't like, if I was smarter I could fork it or remove the option; I'm sure someone smarter than me will handle that but I could also just move to a different desktop without losing my eco-system

0

level 2
N0stis
Op

You mentioned not using mac because the hardware is proprietary. I don't really see where you're getting open source hardware from but why is proprietary hardware bad to you but software isn't?

You have much to learn grasshopper.

2

level 1

6tBF4Cg4qqAAZA

To view and edit pdf, KDE Okular is way better than the alternatives. Plus, you can actually install it on Windows through the Microsoft Store.

KDE Elisa, a music player. Also available to Windows on the store.

MPV, is a lightweight media player, that is also cross platform.

But in all honesty, there is no such thing as a "killer app". I just happened to prefer the workflow of gnome, the stability of Ubuntu, the efficiency (everything feels faster), and the security overall.

By the way, I also use Windows for the little gaming that I do once a week. So despite that I don't like Windows, that doesn't mean that I hate it.

1

level 2

bloat

To view and edit pdf, KDE Okular is way better than the alternatives.

What's the advantage(s) of Okular compared to something like PDF XChange Editor?

1

level 1

TheActualStudy

I honestly don't know if there is a good switch-pitch for a writer's workflow. I could make a pitch to someone interested in software development, computer infrastructure, AI, scientific computing, or automation, but I don't know how writers would get a better experience using Linux.

The "Killer App" is leanness and licensing, really. Producing a docker container with Windows seems like a fool's errand to me because it would be necessarily more bloated and have a per-instance cost. For individuals, it's more niche. If you're a dev then many distros might be pre-configured more to your liking

and would have minimal overhead. The workflow you described would work equally well on any computing device, so I'm also having a hard time understanding what friction you're even trying to address on your current setup. Is there something going on that you're annoyed with? If not, you probably shouldn't switch.

1

level 1
mykepagan

Apache, nginx, mysql/mariadb

1
level 1
malsell

The killer thing for Linux is I don't have to deal with Micro$oft. 20+ years ago, yes, Microsoft had some advantages, but I currently don't see any when it comes to computing. Office and Gaming have been the only two things propping up the OS. Personally, I don't know what people's obsession with Office is. To me, it's just another office suite. There's not a single thing I can do with MS Office that I cannot do with LibreOffice and Evolution. Are there some formatting issues going between the two, yes, however, that exists with any other office suite including Word Perfect. At least by using Linux and using as much Open Source software as I can, I know that (1) I'm not giving my data to a company without fully knowing what is going on and (2) when there are issues, they are fixed quickly. Yes, I use Arch, but that is by preference, I'm not going to preach it on the mountain. I can use LibreOffice to write and publish books, I can use Sigil for e-publishing, I can use manuskript to create databases for characters, plots, themes, etc. I use Gimp for photo editing. I use KDEnLive and OBS for video. All of these tools are freely available for all systems, I'm not tied into a platform. I could decide tomorrow that I want to use FreeBSD and still be able to keep my workflow going. Sometimes the tools Linux has don't look as nice or don't play well with others, but a lot of that is because companies like Microsoft love to have their walled garden with paid admission. Adobe and AutoDesk are, in my opinion, even worse offenders than Microsoft hiding behind a subscription service as well.

1

level 1
cornmonger

The typical modern end-user needs and uses one app: A web browser.

All four major desktop platforms offer this without any real advantage over the other.

The MS Office suite is available as Office 365 now, so Office lock-in isn't really a thing for typical users anymore.

It really just boils down to preference and specialized use cases.

1

level 1

weresabre

My Linux "killer app" is FUSE (Filesystems in Userspace), which allows me to easily mount all kinds of esoteric filesystems that I can navigate with ordinary file manager tools.

https://www.kernel.org/doc/html/latest/filesystems/fuse.html

https://en.wikipedia.org/wiki/Filesystem_in_Userspace

I primarily use ntfs-3g (Windows filesystem), sshfs (remotely mounting filesystems through ssh), encfs (mounting encrypted filesystem), and google-drive-ocamlfuse (mounting Google Drive share).

level 1

Dist

Nice post! I asked myself this question month ago. Curiosity moved me.

My theory is, significant part of convention that Linux does things better is because Linux is often operated by more skilled people due to its high entry barrier. These people would do everything better on any machine. This is what i think.

Also, what about Mint telemetry? is it a thing?

level 2

N0stis

Op

Well if high entry barrier were a thing equated to skill sets, the Dark Web would be full of geniuses. Believe me it is not.

See my previous post regarding telemetry. I made an offhand comment and I am still learning about it.

1

level 1

ttkciar

The "killer app" is going to be different things for different people.

For me (as a Slackware user), it's:

- Stability measured in years of continuous uptime,
- Security derived from running only open-source (and thus auditable) software -- applications, libraries, kernel, etc.
- The expressive power of the command line (usually bash),
- Having grown up using UNIX (AT&T SysV), Linux behaves the way I expect an operating system to behave. Obviously someone who grew up using Windows is going to have different expectations, so this is rather subjective.

For most people, I would guess the "killer app" is Android, which has been quite a bit more popular than all other operating systems combined for several years now.

level 1
M3n747

LibreOffice is not MS Office and I doubt it would create my books

I'm curious, do you need some very specific niche functionality that's only present in MS Word? Because if all you do is type text, add footnotes and cross-references (and perhaps variables), insert tables and images, and pepper in some basic formatting, then LibreOffice should be more than enough.

level 2
N0stis
Op

Highly complex formatting, 60 MB files. 500 plus pages.

1

level 3
M3n747

Page count and file size shouldn't make a difference here, as for the formatting - I suppose that depends on what you mean by complex.

level 1

Wedeldog

- Claims being highly experienced, responsible IT pro
- Worried about security
- runs Windows 7

/eom

level 2
N0stis
Op

Claims to know of what he speaks, but demonstrates otherwise.

1

level 1
rbenchley

Nginx or Oracle.

level 1
dve-

The reason to use Linux is not a simple application and its functions.

The "killer app" is the copyleft license of the GPL. When people say "smart" people use Linux, they mean smart people care about the freedom of the user. And without a copyleft license like GPL, the user will always be caged.

Yes, there are cushy or golden cages that may be much more comfortable, but they are only comfortable for the people who are not **aware**.

Linux as a desktop system is great for people who are aware of the cage and are not comfortable in it. I prefer a system I am in control in - especially when it is my own damn machine that runs the code in my house.

I want it to be at least possible to know which commands my system is running, because it is my system. I don't like the idea of conceiling it.

edit: Who writes books in MSOffice!? WYSIWYG-Editors are definitely not designed to handle multiple hundreds of publishing papers. The industry standard in technology is LaTex.

3

level 2
jr735

The "killer app" is the copyleft license of the GPL. When people say "smart" people use Linux, they mean smart people care about the freedom of the user. And without a copyleft license like GPL, the user will always be caged.

That's worthy of reading twice.

1

level 1
Annual-Advisor-7916

LibreOffice is not MS Office and I doubt it would create my books

Writing books in Office? Eww. LaTeX is literally made for this.

Thunderbird is not Outlook

There are millions of mail clients out there, chose one you like.

Don't see a replacement for Adobe Acrobat or Adobe Creative Suite

https://www.reddit.com/r/linuxadmin/comments/e6yyyl/acrobat_alternative_for_linux/

All in all basing a OS decision over these three programms is not really reasonable.

6

level 2
N0stis
Op

Again, please reread my OP.

-1

level 3
Annual-Advisor-7916

I read your post and answered, please don't imply I wouldn't have read your post. I even suggested you software solutions for 2 of your 3 points and pointed out that you should probably overthink your OS choice decision making, as after all your choice would depend on Adobe Acrobat.

Either you are low key trolling or want to reassure yourself that nothing else than win 7 will suit your super specific needs (the same as about 99% of the average users have). You are literally requesting the 3 most basic programs, of which there are countless flavours out there. Basing a OS desicion on whether or not you find a PDF reader that looks like your preferred one is silly.

Beside, not updating a system for 9 years is crazy. You have about every major security problem out there. Probably you are not that versed with computers and stuff, but I'd really suggest to read up about cyber security. After all you are most likely using online payments, so at least I like to be sure.

You are writing a book in MS Office? Cool, a mechanical typewriter would be an upgrade.

Using Outlook? Thunderbird looks more intuitive, has countless features and just works, opposed to Outlook.

Adobe? Isn't the company name scary enough?

3

level 3
jr735

He quoted your post in his reply.

2

level 1
TheActualStudy

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computing device, so I'm also having a hard time understanding what friction you're even trying to address on your current setup. Is there something going on that you're annoyed with? If not, you probably shouldn't switch.

2
level 1
redddcrow

fact: Microsoft and Adobe have to interest in porting their apps to Linux so that's why their not there.

2

level 1
X547

Docker.

2

level 2
N0stis
Op

Docker.

Off topic!

-1

level 1
weresabre

My Linux "killer app" is FUSE (Filesystems in Userspace), which allows me to easily mount all kinds of esoteric filesystems that I can navigate with ordinary file manager tools.

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2

level 1
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2

level 1
Metataphysika

I want to say as an exclusive Linux user (except when I must use Windows-compatible software on a VM), that I totally appreciate your question and I'm very annoyed to find you voted down. Why should those of us who prefer Linux give you downvotes for asking totally reasonable critical questions?

Windows 7 was the best Windows ever, period. I'm glad you have made it work for you.

I would say that for your purposes, Windows 7 may be best for you. The reasons I prefer Linux (in no particular order) are 1) I trust it more because a massive community is able to monitor its source code, so as an "average" user I don't have to worry about hidden malware, 2) I hate the limitations of a point and click environment controlled by MS -- GNU/Linux CLIs (mostly BASH) give you a level of control and programmability that is way beyond Windows, 3) a wide array of desktop choices, 4) massive repositories of trustworthy open source software that is free in every sense and monitored in a fairly centralized way, and which is incredibly useful for achieving virtually anything, and highly versatile and programmable.

In short, I can't imagine the horror of going back to Windows and giving up all of this, except when I have to use Adobe products for example.

Regarding LibreOffice: Yes, you can typeset books with it.

2

level 2
N0stis
Op

Windows 7 was the best Windows ever, period.

We share this belief and I have the final PC Mag print edition cover featuring Win7 framed on my office wall.

I don't care about any votes. I am just trying to extract some information from those with knowledge in a flaming sea of MALA zealots.

1
level 1
redddcrow

...let me grab some popcorn

2

level 2
N0stis
Op

I recognize that as legacy Reddit having read the We are the nerds book.

0

level 2
Broken_Canoe

Oh you've got to see the website linked in the main post to see how thoroughly unhinged this one is.

1
level 1
No_Internet8453

The Killer Apps you are missing are all subject to your own use case. For me, I much prefer using Linux as my desktop operating system of choice, but that's my own choice. I keep windows around for tasks that just require me to use windows. A lot of what people are portraying when they say "smart people use Linux" is that they are elitists. I'm not trying to tell you to drop windows in place of Linux. Use whatever works best for you. Might I suggest using wsl (requires win10 or win11) if you want to try to integrate some of linux's strengths into your workflow?

2

level 1

EtherealN

The Linux killer app is the same as all Unix and unix-likes (except Apple):

It's your system.

Illustration: back in the day, running Windows 98 (so we're fairly modern...), I was able to get rid nearly all of the Windows desktop environment. Just remove from the autostart, replace with BlackBox or an OpenStep clone, etc etc. It was fine, everything worked, I could still play my games and do whatever I wanted.

Nowadays, both Windows and Mac take every measure they can, often including hardware lockouts, to make god DAMN sure you use EXACTLY the UX that THEY designed. With all the bloatware, data harvesting, and so on that comes with it.

If you want a different UX, just hope some company somewhere makes a product, after paying enough to get access to the locked-down libraries, that you can purchase whatever THEY thought you would like instead...

While, over in Linux/BSD/etc-land, no-one can tell me what my UX should be like. Because, surprise, the UX built to make sure my dad can use computers is not what lets me - an engineer - be productive. Hell, it's often not even how I want to keep track of my applications... (The Start Menu is stupid, and MacOS not having tiling is stupid, so there we're sitting where the only non-stupid UX available to me for my usecase and my preferences is anything not touched by any of those orgs...)

(Personal context: I used to use Windows as main machine, since I used to work in game development, and before that as a game journo in one of them print magazines, I even started a discussion forum for that mag back when having that meant you were awesome. :P I currently have a MacBook Pro for work because I'm in a large corporation running a web and app service. At home, my gaming computer runs Linux, my portable gaming system is a Steam Deck (so Linux), and my main project laptop runs OpenBSD, while most of my home-made private cloud replacements for silly crap like OneDrive on a few Raspberry Pi's in a closet running mostly Linux... Etc.)

Essentially: The "Linux" (and BSD) "killer app" is that I can use the systems without having decisions made for me by either Cupertino or Bellevue. This is awesome.

2

level 2

EtherealN

I'll add one more, as a side-lol from work:

The ability to work with any modern web service without special funky tools.The amount of times I see people running into absolute chaos because their org, developing a service that runs on Linux, insists their devs use Windows laptops... ... ... and then you have to go through all kinds of horrible shenanigans just to successfully run the application in your dev environment...

Hell, Microsoft has spent an ungodly amount of effort to hypervisor the shit out of Windows - through "WSL" etcetera - because their dev experience for anything not specifically targeting Windows clients was so shit it was handing the entire web deb and infra dev market to Apple on a platter, because while there's a lot of things I dislike about my work-issued macbook pro... It's actually useful in an environment developing for web services. :P

(Apple is working hard on ruining that though, since the incompats and lacking documentation on their new silicon compared to writing Dockerized applications that run on some Redhat or SuSE based infra...)

1

level 1
gabriel_3

The unsupported Windows 7? Really?

The worst supported GNU/Linux distro offers a killer feature you don't have on Windows 7: it is supported.

2

level 1
Living-Track-2208

The kernel, GNU utils, filesystem permissions, etc. The OS itself is the killer app. It's so much better than Microsoft's offerings that we'd still rather use it despite not having pretty bloatware like Office and Outlook.

You sound like a product guy, Linux might be a bit technical for someone who doesn't think LibreOffice can write 'books' or is asking about killer apps in the first place 😂

2

level 1
No-Theme-2557

The low resource consumption of Linux makes it a great choice for old or low-end machines. You can breathe new life into an old machine by installing Linux on it. And, if you are on a tight budget, you can buy a low-end machine and install Linux on it to save money.

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2

level 2
N0stis
Op

Off topic!

-2

level 1
Big-Philosopher-3544

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2

level 2
N0stis
Op

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You have much to learn grasshopper.

1

level 1
zam0th

What would make me abandon Windows and the high productivity levels I have now?

Nothing. Even though managing end-user linux machines is easy with Chef/Puppet or maybe even Ansible, none of that comes close to the combined power of MSAD and MSSC and automated stuff you could centrally provision with a click of a button. *This* is the blocking issue, not supposed lack of applied programs (ffs, stop using the bullshit "app" word, you're not talking about ios) or some user functionality.

And as i've been saying for decades, linux is not a *professional* or *corporate* desktop environment [yet] and it should not be understood as such just because some dudes on the internet managed to run Steam and some games with wine on it and patched KDE2 for FreeBSD (c).

Feel free to use Windows ecosystem where it's best - end-user experience, and **Linux ecosystem where it's best - server workload execution platform.**

1

level 1
Dist

Nice post! I asked myself this question month ago. Curiosity moved me.

My theory is, significant part of convention that Linux does things better is because Linux is often operated by more skilled people due to its high entry barrier. These people would do everything better on any machine. This is what i think.

Also, what about Mint telemetry? is it a thing?

1

level 2
N0stis
Op

Well if high entry barrier were a thing equated to skill sets, the Dark Web would be full of geniuses. Believe me it is not.

See my previous post regarding telemetry. I made an offhand comment and I am still learning about it.

level 1
mykepagan

Apache, nginx, mysql/mariadb

level 1
malsell

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1

level 1
cornmonger_

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The MS Office suite is available as Office 365 now, so Office lock-in isn't really a thing for typical users anymore.

It really just boils down to preference and specialized use cases.

level 1
rbenchley

Nginx or Oracle.

1

level 1
Jono-churchton

QEMU/KVM

1

level 1
jr735

'There also seems to be quite a bit of Mint telemetry that I have not yet learned to turn off.'

Can you prove that, or it just "seems" that way?

1
level 1
Mark12870

xkill

1

level 1
Funny_Consequence_32

Free

1

level 1
priestoferis

LibreOffice is definitely not MS Office as in: it really is worse. I'm not so sure about Thunderbird, I personally use aerc for all my mail that is non-company and I very much dislike the Outlook I'm forced to use at work.

As somebody who's been using Linux for the last say 15 years and now work at a company that runs on Windows 11: the "killer apps" are the terminal emulators for which ConPty WSL is but a poor substitute, and any decent tiling window manager (like i3) for which again the existing substitutes in the Windows world are non-seamless hacks and the "killer feature" is configurability.

Back in the Uni days I used the Office Suit in o365 when I needed something better than LibreOffice (or something compatible with MS Office), that the only thing I "miss" from Windows.

1
level 1
9aaa73f0

It's the ethos of open source that is the underlying difference. e.g. You can 'click on the links' in an email under an open source ecosystem and not have to fear having to reinstall. (But perhaps there are a few days in history where that might not have been true)

Any open source apps under Linux can be ported to Windows, so you won't find great apps exclusive to OSS. It will be more trustworthy under OSS because there wasn't a commercial intent behind the tool chain, distribution channel, or development.

With a lot of work and understanding, non-Free systems can be trusted to an extent, I guess. But you don't have to put in that effort to be secure under an OSS, just need to know the basics.

GIMP and Inkscape are good graphics apps

1

level 1

Constant_Peach3972

Cinnamon, it looks a lot better, and is a lot more stable than the windows desktop.

For everyday users there's nothing missing, you have chrome or firefox, audacious, mpv, even MS Teams, and can game on steam within 10% less (or sometimes more) than windows performance.

All of that with hassle-free upgrades, no spyware, telemetry etc.

There's 0 reason to use windows nowadays unless you need something like autocad (but you can still boot from external SSD or run virtualbox mind you)

1

level 1

Markl0

linux shells and terminal emulators. Powershell is mid at best, cmd is total ass and the new terminal emulator is also just mid. It isnt an app but the power to do what you want and not fight the OS for doing so, rather linux encourages through its FOSS architecture complete mutability. If you personally haven't rubbed against the many Windows problems and are OK with the duplo side of things, use windows, you belong there. I can't use Windows for longer than a few hours before cursing Gates'es name and for work Im often forced to use this inferior operating system. Another big one is interface. I use my arch build way faster than I ever could with windows, for the reason that if I think of a better way to issue a command, order windows and apps, etc. I can simply implement it and try it out, the DE of linux offers a great interface for tinkerers who want just that. It isnt only speed that Im after, but also flow of thought. A well tuned OS will allow you to switch between apps, do this and that, shaped to the way you think and work.

1

level 1

handogis

I am writing my fifth 400 plus page historical novel in Word... LibreOffice is not MS Office and I doubt it would create my books

I'm not sure how you can write a "book" in Word but somehow LibreOffice can't do it. Are you using some 25 year old abandoned file format that only MS still supports? Sounds like a PEBCAK issue to me. Maybe it's time to move on to a more Open format...

1

level 1
dontevendrivethatfar

Virtual machines. Linux does it so much better

1

level 1
metamucil0

The issue is that the potential answers I come up with work well on MacOS since it's Unix based. There isn't much proprietary software for Linux because the entire philosophy opposes that

Actually now that I think about it, it's the various window managers available. i3, for example. There aren't windows or MacOS alternatives that really compete because you are stuck with their desktop environments underneath ultimately.

1

level 1
tims1979

For me it's not so much one killer app but the idea of choice. If you use Windows or Mac everyone is pretty much forced to use the same workflow. With Linux you can find the workflow that works best for you. Me, I really like tiling window managers. Others may like a traditional desktop set up like Cinnamon. With Linux we have that choice.

1

level 1
dev-porto

Is windows 7 still being supported? If they find a security breach in some Network stack or OS API, will Microsoft fix it for windows 7?

If the answer is no, that is reason enough to not use it.

1

level 1
linuxrunner

Your comparisons are to relatively shitty software. For office use OnlyOffice or MS Office in the browser. For email client there are several options or you could just use outlook in the browser. Adobe can go fuck itself. The reason smart people use linux is because they realize the benefits far outweigh the consequences.

level 1
whatathrill

for me it's mostly the convenience of being able to run the same things I write for a predominantly linux server ecosystem for work. WSL can actually get really awkward with the filesystem sometimes.

Honestly, windows isn't gonna last forever. But I do feel it offers many advantages for a user PC. It exists in a shrinking space imo.

1

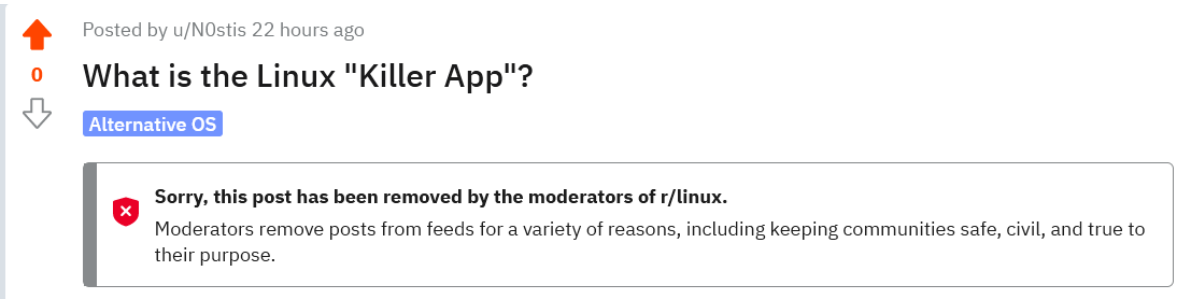
level 1
colbyshores

Ansible. It does not run on windows. It’s the go to configuration management language. I’d also say Python as well. Even though it runs on windows. That’s kind of second class citizen support

1

level 1
bengosu

Nmap



So having had limited experienced Reddit before, mostly just to search and read some posts and find info, and having been on the Dark Web for a few months, I was fully aware of this wolfpack-like sniper behavior. That said, I have not seen these zealots gang up and down vote a posting closed before.

While this experience was somewhat reflective of the Linux community as a whole in my experience, it is more reflective of what anonymous communication on the Internet looks like in general. Not having to "own your words" as Stewart Brand insisted on with the WELL BBS, historically allows this kind of behavior on Reddit and the Dark Web among other places.

AutoModerator commented on

Mod 1 point

Sorry, your comment has been automatically removed. Your combined karma is too low. We require more than 15 combined karma. If you do not have the required karma, make some quality submissions on Reddit and then try again or send in a modmail to become verified.

I am a bot, and this action was performed automatically. Please contact the moderators of this subreddit if you have any questions or concerns.

level 1
linux-ModTeam
Mods· Stickied comment

This post has been removed as not relevant to the r/Linux community. The post is either not considered on topic, or may only be tangentially related to the r/linux community.

examples of such content but not limited to are; photos or screenshots of linux installations, photos of linux merchandise and photos of linux CD/DVD's or Manuals.

Rule:

Relevance to r/Linux community - Posts should follow what the community likes: GNU/Linux, Linux kernel itself, the developers of the kernel or open source applications, any application on Linux, and more. Take some time to get the feel of the subreddit if you're not sure!

Well now isn't this interesting. Not relevant? So this is how you as Reddit pacify or tame

the zealots and get them back into their cages apparently.

So as is Lefty's MO, he picked another name, rejoined r/linux sub and posted his final word on this subject.

Posted by
u/arister0s

Linux Software

Popular Application

In a recent post here, down-voted into oblivion and now vanquished by the mods, a question was proffered by a member called n0stis regarding the premiere Linux software program. Vitae were offered in this post visualizing the OP's experience and accomplishments as background, perhaps to avoid attacks, which was a hopeful, perhaps naive, but ultimately an unsuccessful thought.

This OP obviously had some impressive Word (MS Office) skills as well as computer configuration skills to be able to create highly complex formatted and lengthy books and publish them to the world in PDF form. Those who chided these choices only showed their own lack of skills and their ignorance.

This OP also apparently has significant Op/Sec skills to be able to safely and productively run Windows 7 (on the clear web and dark web) for the past sixteen years, and a decade without the MS phony and dubious updates, regardless of MS EOL declarations. Again, those who derided this OP for this only showed their own lack of knowledge, rather than taking an opportunity to perhaps learn some things.

So this OP also clearly identified himself as a new Linux user, and express hesitation on being abused on this sub. So if you were not looking to be hateful and cruel, a more appropriate response would have been something like this:

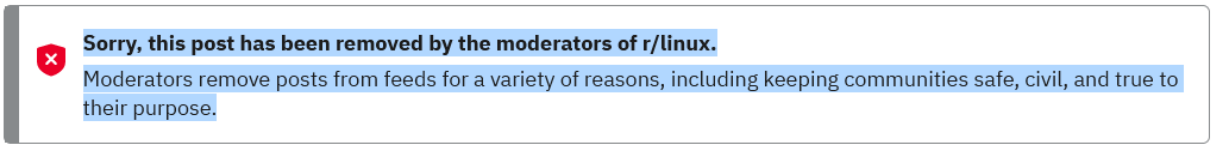
I don't know if any of these could be considered a killer app in the traditional sense of the phrase, but many people find this library of Linux software helpful. They are in no particular order or grouping.

1. Writing documents, with groff, and LaTeX, LibreOffice
2. Evolution, Thunderbird for email
3. To view and edit PDF, KDE Okular
4. Filezilla, for FTP file transfers
5. GIMP and Inkscape for graphics programs
6. Brave, Firefox and Vivaldi for web browsers
7. VLC Media Player for audio and video file playback
8. Rhythmbox audio player
9. Proton VPN, Express VPN, Mullvad VPN, for online anonymity
10. Tor-Browser for Website anonymity
11. GNU Image Manipulation Program (GIMP)
12. Misescore to arrange and compose music
13. LMMS to create wave files of orchestral and band instruments create on Musescore
14. Bitwarden for password management
15. Intellij/pycharm is a free and open-source password manager

16. Taskwarrior for time and task management tool, used to keep track of and handle tasks
17. OBS Studio, an open source streaming and recording program
18. Typora, a markdown editor and reader for writers
19. Anki, a flashcard program
20. Spotify audio streaming service
21. InSync (all books & docs in sync with drive)
22. AntiMicroX (utilizes 8BitDo Zero 2 gamepad for anki)
23. Evince reader, document viewer
24. Kate, text editor and Document Scanner
25. Video Downloader, browser extension for streaming video downloads
26. Handbrake, transcoder for digital video files
27. Wine / compatibility layer that aims to allow application software and computer games developed for Microsoft Windows to run on Unix-like operating systems.
28. PlayOnLinux a graphical front end for the Wine software compatibility layer
29. Kiwix an offline web browser
30. GNOME Terminal is a terminal emulator for the GNOME desktop environment which allow users to access a UNIX shell while remaining on their graphical desktop
31. SSH File Transfer Protocol (also known as Secure File Transfer Protocol or SFTP) is a network protocol that provides file access, file transfer, and file management over any reliable data stream.
32. Caja the official file manager for the MATE desktop environment
33. Visual studio code is a source-code editor
34. Discord is an instant messaging and VoIP social platform
35. Obsidian is a personal knowledge base and note-taking software application
36. Telegram Messenger is a globally accessible freemium, encrypted, cloud-based and centralized instant messaging (IM) service
37. nautilus is a file manager
38. Celluloid, is a media player
39. Xed is a lightweight text editor and is the default text editor in Linux Mint
40. Audacious is a free and open-source audio player software
41. Xreader is a document viewer
42. htop is an interactive system-monitor process-viewer and process-manager
43. BitTorrent is used for uploading and downloading files via the BitTorrent protocol.
44. AnyDesk is a remote desktop application
45. qBittorrent is a cross-platform free and open-source BitTorrent client
46. SMPlayer is a cross-platform graphical front-end for MPlayer and mpv
47. KiCad is a free software suite for electronic design automation
48. Selenium is an open source umbrella project for a range of tools and libraries aimed at supporting browser automation
49. Steam is a video game digital distribution service and storefront
50. Vim is a free and open-source, screen-based text editor program.
51. Blender, is a free and open-source 3D computer graphics software tool set used for creating animated films, visual effects, art, 3D-printed models, motion graphics, interactive 3D applications, VR
52. OpenSCAD, FreeCAD, Cura, Darktable
53. EasyEffects (formerly known as PulseEffects) is a free and open-source GTK application which provides a large array of audio effects and filters to apply to input and output audio streams
54. Kdenlive is a free and open-source video editing software
55. Oracle VM VirtualBox (formerly Sun VirtualBox, Sun xVM VirtualBox and InnoTek VirtualBox) is a type-2 hypervisor for x86 virtualization
56. VeraCrypt is a free and open-source utility for on-the-fly encryption
57. MKVToolNix is a collection of tools for the Matroska media container format

58. Xfce or XFCE is a free and open-source desktop environment for Linux and Unix operating systems
59. Krita is a free and open-source raster graphics editor
60. Godot is a cross-platform, free and open-source game engine
61. LibreWolf is a free and open-source web browser and fork of Firefox with an emphasis on privacy and security
62. mpv is free and open-source media player software
63. Flameshot a utility for taking screenshots
64. Windscribe is a commercial, cross-platform virtual private network (VPN) service provider that is based in Canada, but operates internationally
65. Transmission is a BitTorrent client
66. Unity is a cross-platform game engine
67. FMOD is a proprietary sound effects engine and authoring tool for video games and applications
68. REAPER (an acronym for Rapid Environment for Audio Production, Engineering, and Recording) is a digital audio workstation and MIDI sequencer application
69. Calibre is an ebook manager
70. Okular is a multiplatform document viewer
71. KeePassXC is a free and open-source password manager
72. Foliate is a free e-book reading application for desktop Linux systems
73. Clipix is a privately funded company offering an online bookmarking, file sharing, and organizational tool
74. Stardew Valley is a simulation role-playing video game
75. Bottles is an application that allows you to easily manage Windows prefixes on your favorite Linux distribution
76. Stremio is a modern media center that's a one-stop solution for your video entertainment
77. Fade In Professional Screenwriting Software is screenwriting software for writing screenplays
78. Clementine is a music player
79. Deluge BitTorrent Client is a free and open-source, cross-platform BitTorrent client
80. Terminus is a space-flight role-playing action video game
81. Syncthing is a free, open-source peer-to-peer file synchronization application
82. Sublime Text is a shareware text and source code editor
83. Nemo is a free and open-source software and official file manager of the Cinnamon desktop environment
84. Asunder is a CD Ripper
85. ClamTk is a free software graphical interface for the ClamAV command line antivirus software program
86. AppImage is a format for distributing portable software on Linux without needing superuser permissions to install the application
87. Strawberry is a Music Player
88. OpenShot Video Editor is a free and open-source video editor
89. Gambas is the name of an object-oriented dialect of the BASIC programming language
90. RAR is a proprietary archive file format that supports data compression, error correction and file spanning
91. Emacs is a family of text editors
92. Inkscape is a free and open-source vector graphics editor
93. Pinta is an open-source, cross-platform bitmap image drawing and editing program
94. RetroArch is a free and open-source, cross-platform frontend for emulators, game engines, video games, media players and other applications
95. LightZone is a free, open-source digital photo editor software application
96. Eclipse is an integrated development environment (IDE) used in computer programming
97. Rust is a multi-paradigm, general-purpose programming language

98. Lutris is a free and open source game manager
99. SimpleScreenRecorder can capture a video-audio record of the entire computer screen or part of it
100. Audacity is an open-source digital audio editor and recording application software
101. PCSX2 is a free and open-source PlayStation 2 emulator
102. Re-Volt is a racing video game
103. Git is a distributed version control system that tracks changes in any set of computer files
104. PyCharm is an integrated development environment (IDE) used for programming in Python
105. RimWorld is a construction and management simulation video game
106. Team Fortress 2 is a 2007 multiplayer first-person shooter game
107. Slack is an instant messaging program
108. GitKraken is a suite of developer tools
109. Lunacy is a UI/UX - Design Program
110. Joplin is a free and open-source desktop and mobile note-taking application
111. DaVinci Resolve is a color grading, color correction, visual effects, and audio post-production video editing application
112. Gqrx is a software defined radio
113. Kile is a TeX/LaTeX editor to edit TeX/LaTeX source code
114. Remmina is a remote desktop client for POSIX-based computer operating systems
115. JDownloader is a download manager, which allows automatic download of groups of files from one-click hosting sites
116. pCloudy is a mobile application testing platform on cloud



level 1
MajesticProfession34

This is quite sad. It's obviously just you with another account.

19

level 2
dementedsnake

What makes y0u say that?

4

level 1
SwallowYourDreams

Do you often write about yourself in the third person? ;)

14

level 2
watermelonspanker

Don't you mean "Does Caesar often write about himself in the third person"?

1

level 1
Th4ray

This OP also apparently has significant Op/Sec skills to be able to safely and productively run Windows 7.

You can't write together opsec skills and Windows 7 together on a sentence.

Also why do you recommend Groff to write document to a new Linux user? Stopped reading right there.

10

level 2

watermelonspanker

Are you saying that 'productively running' Windows 7 'on the dark web', 'despite being EOL', *is not* a good practice? Whatever, you probably just aren't a 1337 h@xxx0r like OP is.

I mean... like the "original OP" was, since this post was *obviously* written by a third party individual.

4

level 1

ZorakOfThatMagnitude

I saw the post as well, but I wouldn't characterize it as a request for a software recommendation for any one particular thing. He was more describing how well he knew his setup, how to use it, and sort of issued a vague challenge of "If I know windows this well for what I particularly want to do, why would I switch to doing it in Linux?"

Especially if he had no interest in learning new software(which his post hinted at). I think that was what people were picking up on. Why go posting about how one prefers one's setup in a forum that has little-to-nothing to do with that setup? It came off more like a rant rather than a genuine request.

My answer I didn't post would have been that he would have no reason to. if he's happy running it that way, run it. So long as he's not using EOL OS/software in a way that would open it up to exploitation by a third party, he shouldn't have much to worry about.

2

level 1

doomygloomytunes

No-one is bored enough to read this.

All package managers have a keyword search facility btw

2

level 1

skreemsInGibbrish

99% chance this is some list copypasted from somewhere

2

level 1
MedicatedDeveloper

This is not a support sub.

2

level 1
kor34l

Hello n0stis the second.

Transparent second account is transparent. You aren't as clever as you think you are.

2

level 1
Dist__

imo, writing a list of programs makes opposite impression of the OS. Like it's early 90s.

in fact, there's ton of software for every task, as supposed for Every Serious OS.

4

level 1
Webgiant

While I appreciate your dedication and thoroughness, the message was lost in the forest of too much information.

I have made long posts myself, but TL;DR is... inadequate to describe the post you have made here.

A better way to do this would be to organize the apps into groups and the first message is the index, then do multiple replies to your original message with the separate groups.

1

level 1
Puschel_das_Eichhorn (Puschel_the_squirrel)

Although I believe that your previous post wasn't nearly as bad as the respondends and mods made it out to be, I do believe that it embodied a misinformed belief: the idea that operating systems need a single (or a few) killer app(s) to be succesful, like the way Lotus 1-2-3 once shaped history by popularizing DOS.

Nowadays, it rarely happens that a single application leads people to amother platform (at least not in the world of desktop applications); pretty much any new commercial desktop application will be written for Windows and/or the Mac, in order to reach most customers, and when an open-source desktop application which was originally written for Linux becomes succesful, it will undoubtedly get ported to Windows and/or the Mac.

The things that come closest to "killer applications" for Linux, are by no means the available desktop applications; it is all server software, virtualization/containerization stuff, "cloud", et cetera. In general, server-ish tasks are handled better by Linux or BSD than they are by Windows.

Many programmers prefer desktop Linux over Windows, but I doubt if a single application can be named as the reason for that; more likely, this is motivated by a whole ecosystem of available, interconnected tools, that make building many kinds of applications more convenient than it would have been on Windows.

I'm sorry that your original post was removed, but I do not think that this new post is the best way to respond to that; this long list of software only makes it clear that you seem to misunderstand the meaning of the word "killer app", and it has a "spammy" ring to it. Also the tone of this post's first few paragraphs give off an entitled, crybaby-ish attitude, inconsistent with your claimed age. Please take this is feedback, not as an insult.

level 2
arister0s
Op

I'm sorry that your original post was removed, but I do not think that this new post is the best way to respond to that; this long list of software only makes it clear that you seem to misunderstand the meaning of the word "killer app", and it has a "spammy" ring to it. Also the tone of this post's first few paragraphs give off an entitled, crybaby-ish attitude, inconsistent with your claimed age. Please take this is feedback, not as an insult.

I think that what this subreddit needs is a sub on Remedial Reading with a focus on reading comprehension and retention.

I had spent a couple of hours curating and expanding a series of small voted lists from another Linux sub. I did this for my own purposes but decided to share it here.

Well, no good deed...

AutoModeratorAutoModerator notification
expand allcollapse all

[–]from AutoModerator

https://www.reddit.com/r/linux/comments/15vqbyj/linux_software/jx05y4t/?context=3

Hello from r/linux!
Your account is too new. Please come back after 5 days. Note that there may also be karma requirements which are detected after age requirements are met.
Please note that if you're here to post about a support question the proper subreddit is either /r/linuxquestions or /r/linux4noobs.
I am a bot, and this action was performed automatically. Please contact the moderators of this subreddit if you have any questions or concerns.

Ok, whatever. It has become clear that the Reddit Linux community is not a friendly place to visit or ask for help.

Miscellaneous Info

I guess we will let an AI have a say about slow Internet speeds.

LE Why is American Internet slow compared to other developed countries?

There are several factors that can contribute to the perception that internet speeds in the United States are slower than in other developed countries. Here are a few possible explanations:

1. Infrastructure: One reason for slower internet speeds in the US could be the country's infrastructure. Some areas of the country may not have access to high-speed internet due to limitations in the existing infrastructure, such as outdated or inadequate wiring or a lack of fiber optic cables.
2. Competition: Another factor that could contribute to slower internet speeds is the level of competition among internet service providers (ISPs). In some areas of the US, there may be only one or two ISPs offering service, which can result in limited options for consumers and little incentive for providers to improve speeds.
3. Regulatory environment: The regulatory environment in the US may also contribute to slower internet speeds. Some critics argue that regulations around internet service providers have been too lax, leading to monopolies and limited competition.
4. Geography: The US is a large and diverse country with a population spread out across vast distances. This can make it more difficult and expensive for ISPs to provide high-speed internet service to all areas.
5. Perception: Finally, it's worth noting that perceptions of internet speed can be subjective and influenced by a variety of factors. For example, if an individual is used to very high internet speeds, even relatively fast speeds may seem slow by comparison. Additionally, speed tests can be influenced by factors such as the time of day, network congestion, and the specific server being used for the test.

What is the Measuring Broadband America Program?

ChatGPT 3.5

The Measuring Broadband America Program is an initiative conducted by the Federal Communications Commission (FCC) in the United States. Its purpose is to assess and monitor the performance and quality of broadband internet services provided by internet service providers (ISPs) across the country.

The program was launched to address concerns about the accuracy and transparency of broadband speed claims made by ISPs. It aims to provide consumers with reliable information about the actual performance they can expect from their internet service and to promote competition among ISPs.

Key components of the Measuring Broadband America Program include:

1. Broadband Speed Tests: The FCC conducts rigorous performance tests on broadband connections from various ISPs across the United States. These tests measure key metrics such as download speed, upload speed, latency, and packet loss.
2. Data Collection: The FCC collects data from volunteers who agree to participate in the program and have their internet connections tested. This data is collected from various geographic areas and demographics to represent a wide range of internet users.
3. Reports and Findings: Based on the collected data, the FCC publishes reports and findings that detail the performance of different ISPs. These reports provide insights into the actual speeds and quality of internet services delivered by each ISP, allowing consumers to make more informed decisions when selecting a provider.
4. ISP Accountability: By publicly releasing performance data, the program encourages ISPs to deliver on their advertised promises and ensures greater accountability in the industry.

The Measuring Broadband America Program has been instrumental in shedding light on the actual performance of internet services in the US and has helped consumers make more informed choices about their internet providers. It also helps identify areas where improvements are needed to enhance the overall quality of broadband services nationwide.

Meanwhile, I saw an AI cartoon:

I warned about this below ten years ago in my second book.

US Plans More Regulations to Improve Cloud Security (politico.com) 11

Posted by EditorDavid on Saturday March 11, 2023 @04:45PM from the outlook-is-cloudy dept.

Politico reports: Governments and businesses have spent two decades rushing to the cloud — trusting some of their most sensitive data to tech giants that promised near-limitless storage, powerful software and the knowhow to keep it safe.

Now the White House worries that the cloud is becoming a huge security vulnerability. So it's embarking on the nation's first comprehensive plan to regulate the security practices of cloud providers like Amazon, Microsoft, Google and Oracle, whose servers provide data storage and computing power for customers ranging from mom-and-pop businesses to the Pentagon and CIA.... Among other steps, the Biden administration recently said it will require cloud providers to verify the identity of their users to prevent foreign hackers from renting space on U.S. cloud servers (implementing an idea first introduced in a Trump administration executive order). And last week the administration warned in its national cybersecurity strategy that more cloud regulations are coming — saying it plans to identify and close regulatory gaps over the industry....

So far, cloud providers have haven't done enough to prevent criminal and nation-state hackers from abusing their services to stage attacks within the U.S., officials argued, pointing in particular to the 2020 SolarWinds espionage campaign, in which Russian spooks avoided detection in part by renting servers from Amazon and GoDaddy. For months, they used those to slip unnoticed into at least nine federal agencies and 100 companies. That risk is only growing, said Rob Knake, the deputy national cyber director for strategy and budget. Foreign hackers have become more adept at "spinning up and rapidly spinning down" new servers, he said — in effect, moving so quickly from one rented service to the next that new leads dry up for U.S. law enforcement faster than it can trace them down.

On top of that, U.S. officials express significant frustration that cloud providers often up-charge customers to add security protections — both taking advantage of the need for such measures and leaving a security hole when companies decide not to spend the extra money. That practice complicated the federal investigations into the SolarWinds attack, because the agencies that fell victim to the Russian hacking campaign had not paid extra for Microsoft's enhanced data-logging features.... Part of what makes that difficult is that neither the government nor companies using cloud providers fully know what security protections cloud providers have in place. In a study last month on the U.S. financial sector's use of cloud services, the Treasury Department found that cloud companies provided "insufficient transparency to support due diligence and monitoring" and U.S. banks could not "fully understand the risks associated with cloud services."

Online Tests Suggest IQ Scores In US Dropped For the First Time In Nearly a Century 130

Posted by BeauHD on Monday March 13, 2023 from the now-let's-not-jump-to-conclusions dept.

A group of psychologists, two from Northwestern University and the third from the University of Oregon, has found via online testing that IQ scores in the U.S. may be dropping for the first time in nearly a century. Phys.Org reports: In this new effort, the researchers studied the results of online IQ tests taken by adults participating in the Synthetic Aperture Personality Assessment Project over a 12-year period. They found that IQ scores have dropped for all age groups, regardless of gender. They also found that the steepest declines were among young people. They also noted that while a few skills, such as spatial reasoning, were better than previous generations, other skills, such as problem solving, numerical series assessments and verbal reasoning, had all grown worse.

The researchers did not conduct any research to try to explain the drop, but suggest it might be linked to changes in the education system. They also did not address the issue of the accuracy of IQ test scores in general as a means of measuring a person's intelligence. Published in the journal Intelligence.

Vivaldi Co-Founder: Advertisers 'Stole the Internet From Us' (xda-developers.com) 48

Posted by BeauHD on Monday March 13, 2023 @06:40PM from the current-state-of-the-Internet dept.

Vivaldi is a browser founded by Opera co-founder Jon Stephenson von Tetzchner and launched in 2016 with a heavy focus on privacy and customizations. As someone who has worked on the Internet since 1992, Tetzchner has a lot of thoughts on the state of the Internet in 2023, especially when it comes to advertising. XDA spoke with Tetzchner at this year's Mobile World Congress, and it's clear to him that advertisers "stole the Internet from us." From the report: For the unfamiliar, Android's Privacy Sandbox can track users by creating an offline profile on them and show relevant advertisements based on that. It's a multi-year initiative to introduce more private advertising solutions to end-users and is made possible thanks to the Topics API and FLEDGE. Its goal is to prioritize user privacy by default but still maintain the mobile ecosystem dependent on advertising to support free and ad-supported apps. This is an exclusive-to-Android solution that uses a standalone SDK, separate from the rest of the application code, with the aim of eventually replacing Ad ID. However, Tetzchner doesn't see a difference between standard tracking and companies using the Topics API.

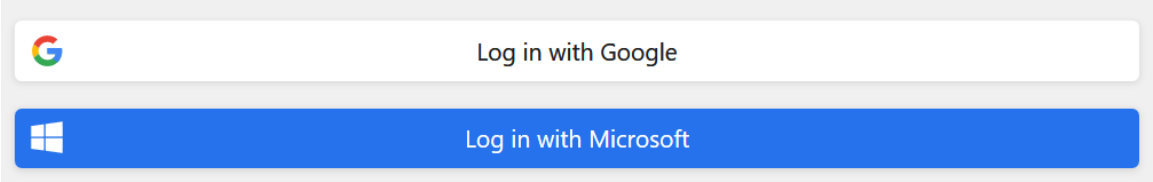
"For us, how you technically do the tracking, you can say it's a little bit better to do it client-side than server-side, but for me, the idea that your browser is building a profile on you... No, no, no, that's wrong. That's just wrong," he tells me. It's not quite where the data goes that seems to bother him the most, but what that data can be used to achieve. He mentions how this data can be used to influence how people vote, a la Cambridge Analytica. Whether that data is on your device or not is irrelevant; political advertisements will still appear regardless. "They stole the Internet from us", he says of advertisers. "The Internet is supposed to be open and free, and you shouldn't be afraid of being monitored. The idea that you are collecting data to provide ads... I can understand having access to a lot of data to provide a service, but that's not the same as profiling your users."

Tetzchner is deeply disheartened with the state of it. In fact, he believes the current state of advertising is less profitable for sites now than it was before widespread tracking was in place. He mentions "normal ads," which you may see in a magazine or on TV, were the standard for about a decade, even on the Internet. "A lot of sites were more profitable, and people were less worried about having to block ads. The ads were normal, it was kind of like what you were seeing if you were going and reading a magazine. There were ads, but they weren't following you." He points out that paywalls have become commonplace across the Internet when that wasn't the case 15 years ago. "How is it then that we needed the change that actually created that situation?" he asks. He argues that advertisements are less profitable as a whole thanks to widespread tracking. Advertisers previously paid more because they knew exactly where their advertisements were going. Now with algorithms and Google Ads, not everything is high quality, even if those algorithms try to scan pages for quality content.

Americans Lost a Record $10.3 Billion To Online Scammers Last Year, FBI Says (wsj.com) 12

Posted by msmash on Wednesday March 15, 2023 @10:40AM from the closer-look dept.
Americans lost more than $10 billion to online scammers last year, new government data show, the highest level since the Federal Bureau of Investigation began tracking losses in 2000. From a report: The FBI said its Internet Crime Complaint Center, or IC3, recorded more than 800,000 complaints in 2022, or more than 2,000 complaints a day. So-called phishing expeditions represented the largest number of scams with more than 300,000 complaints, the FBI said in a report. Phishing usually involves the use of unsolicited email, text messages and phone calls, purportedly from a legitimate company, requesting personal or financial information.
"Today's cyber landscape has provided ample opportunities for criminals and adversaries to target U.S. networks, attack our critical infrastructure, hold our money and data for ransom, facilitate large-scale fraud schemes, and threaten our national security," FBI Executive Assistant Director Timothy Langan said. The total losses to online scammers rose to $10.3 billion last year from $6.9 billion in 2021. However, the overall number of complaints recorded by IC3 fell slightly from 2021.

Sharing passwords across domains is bad OpSec and a real security risk. These companies, especially Facebook, get their passwords hacked all the time. Use MFA.



US Intelligence Confirms It Buys Americans' Personal Data (techcrunch.com) 6

Posted by msmash on Tuesday June 13, 2023 @10:00AM from the how-about-that dept.
A newly declassified government report confirms for the first time that U.S. intelligence and spy agencies purchase vast amounts of commercially available information on Americans, including data from connected vehicles, web browsing data, and smartphones. From a report: By the U.S. government's own admission, the data it purchases "clearly provides intelligence value," but also "raises significant issues related to privacy and civil liberties." The Office of the Director of National Intelligence (ODNI) declassified and released the January 2022-dated report on Friday, following a request by Sen. Ron Wyden (D-OR) to disclose how the intelligence community uses commercially available data. This kind of data is generated from internet-connected devices and made available by data brokers for purchase, such as phone apps and vehicles that collect granular location data and web browsing data that tracks users as they browse the internet.
The declassified report is the U.S. government's first public disclosure revealing the risks associated with commercially available data of Americans that can be readily purchased by anyone, including adversaries and hostile nations. The United States does not have a privacy or data protection law governing the sharing or selling of Americans' private information. "In a way that far fewer Americans seem to understand, and even fewer of them can avoid, [commercially available information] includes information on nearly everyone that is of a type and level of sensitivity that historically could have been obtained" by other intelligence gathering capabilities, such as search warrants, wiretaps and surveillance, the report says.

Comcast Complains To FCC That Listing All of Its Monthly Fees is Too Hard (arstechnica.com) 47

Posted by msmash on Wednesday June 14, 2023 @02:45PM from the how-about-that dept.
mschaffer shares a report: Comcast and other ISPs have annoyed customers for many years by advertising low prices and then charging much bigger monthly bills by tacking on a variety of fees. While some of these fees are related to government-issued requirements and others are not, poorly trained customer service reps have been known to falsely tell customers that fees created by Comcast are mandated by the government. The FCC rules will force ISPs to accurately describe fees in labels given to customers, but Comcast said it wants the FCC to rescind a requirement related to "fees that ISPs may, but are not obligated to, pass through to customers." These include state Universal Service fees and other local fees. As Comcast makes clear, it isn't required to pass these costs on to customers in the form of separate fees. Comcast could stop charging the fees and raise its advertised prices by the corresponding amount to more accurately convey its actual prices to customers. Instead, Comcast wants the FCC to change the rule so that it can continue charging the fees without itemizing them..
I suppose it's just easier to grab people's money than it is to make up names for the fees, Mschaffer adds.

Americans Hate ISPs Almost As Much As They Hate Gas Stations, Survey Finds

Posted by BeauHD on Monday June 26, 2023 @07:00PM from the you-don't-say dept.
An anonymous reader quotes a report from ExtremeTech: Americans hate their internet service providers (ISPs) more than any other segment of the consumer economy -- except gas stations. A fresh set of rankings from the American Consumer Satisfaction Index (ACSI) reveals that few consumers are happy with the way their ISPs conduct business, preferring them only over trips to the pump in a list of 43 major industries. The rankings come courtesy of the ACSI's most recent telecommunications study, which the organization publishes annually. The study covers subscription TV services, video streaming services, and ISPs of both the fiber and non-fiber variety. Using interviews with 22,061 American consumers conducted between April 2022 and March 2023, this year's telecommunications study investigates just how happy people are with their ISPs, then pits that data against that of several other industries. This year, ISPs ranked lower than the endlessly frustrating automobile, banking, and health insurance industries, as well as 39 others that people tend to have an easier time with, such as breweries and athletic shoes.

On a satisfaction scale of 1 to 100, ISPs earned a lackluster 68, which consists of fiber's 75-point and non-fiber's 66-point satisfaction scores combined. The ACSI used customers' input on a number of experiential data points, from choosing a plan to actually using their home Wi-Fi networks, to calculate both scores and combine them based on usage. Although fiber customers found their internet to be relatively reliable and their bills easy to understand, earning an 80 in both categories, non-fiber customers weren't as impressed at 72 and 75, respectively. Unsurprisingly, both fiber and non-fiber customers enjoyed reaching out to their providers' customer service teams the least out of 14 total data points.
There was only one industry that ranked lower than ISPs. As much as Americans generally dislike the way ISPs manage hardware, pricing, customer service, outages, and more, they dislike gas stations even more, giving the category a measly score of 65. While the ACSI doesn't share respondents' reasoning (it's a telecommunications study, after all), it's easy to see why consumers might not enjoy spending obscene money to fill their tanks at dusty roadside stops.

And I am just about completely fed up with Windows as well.

Here's why Windows PCs are only going to get more annoying

As the PC market slows and Microsoft's Windows income stream declines, the company is looking for fresh revenue in all the usual places. The pitches are going to get more persistent.

https://www.zdnet.com/article/heres-why-windows-pcs-are-only-going-to-get-more-annoying/

What version of Linux is most like Windows 7?

ChatGPT 3.5

As of my last update in September 2021, Linux distributions are continuously evolving, and new versions may have been released since then. However, I can provide information based on what was available up to that point.

If you're looking for a Linux distribution that resembles the look and feel of Windows 7, one of the most popular choices is Linux Mint with the "Cinnamon" desktop environment. Linux Mint aims to provide a user-friendly experience and is designed to be familiar to Windows users. The Cinnamon desktop environment has a traditional layout and a start menu similar to Windows 7.

Linux Mint with Cinnamon provides a similar desktop experience, taskbar, and window management that Windows 7 users are accustomed to. Additionally, it often comes with a set of pre-installed software and codecs to facilitate multimedia playback and a wide range of hardware support.

Keep in mind that no Linux distribution is an exact replica of Windows 7, but Linux Mint with Cinnamon is considered one of the closest matches in terms of user experience and interface design. Other options you might consider are Zorin OS and Ubuntu with the GNOME 2 or MATE desktop environments, which also offer Windows-like interfaces.

As of 2023, there may be newer versions of these distributions or other Linux distributions that have improved their Windows-like interfaces, so it's a good idea to research the latest options available at the time.

So I installed linuxmint-21.2-cinnamon-64bit.iso. Stay tuned…

Epilogue

An excerpt from my previous book, *The Insider Goes Deep (Tales from the Dark Web),* envisioning a better future Internet for my grandchildren.

Our Manifesto

We are a group of people who are attempting to spearhead the redesign of the entire Internet. We will put the power in the hands of the people, rather than major corporations, it will be an egalitarian web where you and I, and not Big Tech like Amazon, Apple, Google, Microsoft, and Facebook, have control over our own online presences, finances, and data. What follows are the basic concepts.

Some believe the individualization of all web users provided by Web3's ideals could balloon all of these malicious activities and spawn entirely new ones. The reason for this fear is the utterly anonymous nature of Web3's underlying infrastructure. Just as cryptocurrency has been used to support criminal activity by providing an anonymized method of payment that's beholden to no government or bank, so Web3's tokenized system could also help criminals remain untraceable by any governmental or law enforcement authorities.

Of course, as with any tool, it is all about the people that use it. Citizens living under repressive regimes could benefit greatly from the type of anonymity that could also enable any of the aforementioned crimes.

Web 4 will not have any in-place cryptographic ledger to draw from. An alternative method of handling tokenization will be found.

There will be no NFTs, which are the digital equivalent of a banana duct-taped to a wall: something literally anyone can own at little or no cost, yet they now want you to pay for this idea of its ownership. This in a world where celebrities are coughing up more than half a million dollars for a jpeg of a cartoon ape, it is clear that the sector has been overrun by greed, or perhaps being used as a vehicle for money laundering schemes.

All online security relies on one very fallible factor: human beings. They could potentially expose themselves to identity theft and fraud just as easily as they can today. If they hand over one of those cryptographic keys, it would be no different, and possibly even worse, than if they divulged a credit card or social security number.

New methods of verification and authorization will be devised to combat scenarios like this.

Web4 will not be the Internet trading one set of overlords for another. Venture (vulture) capitalists and their Limited Partnerships LPs, will not replace the likes of Google and Facebook as the autocrats of the web. People will. A globally diverse collective of individuals, coming together in a new area of cyberspace that allows each user to be their CEO. On this new web, you will control your own data, profit (or not) from the sale of all of your information, and remain secure behind tokenization.

We will change basic and fundamental structure of the entire Internet ecosystem.

This type of a true sea change will come but it will not be fast, and it may not exactly resemble what we envision right now, given the unpredictable nature of humans.

Options

In helping to lead the web to its full potential, a number of options were considered for the group to support including:

One option is for the government to nationalize telecommunications infrastructure. It having mostly been paid for by the public anyway, and obviously not working on behalf of the public now to the tune of the four hundred billion dollar broadband scandal. No more throwing good money after bad was one thought.

Other options include a new agency a Public Service Communications Commission, the repeal of state laws banning broadband competition, and the implementation of a plan for permanent net neutrality. That would mean that there would be no intentional fast lanes and slow lanes for data, which are now being created based on financial profit considerations.

There could be no Internet routers trying to peek at packet content to vary their delivery behavior accordingly. This is not innocuous packet header inspection, which determines the destination, but rather deep packet inspection routing and forwarding algorithms, or DPI. This practice is incompatible with privacy, anonymity, and network neutrality. The current weak specification, which is silent on what the network should not do, opens the door to the malicious behavior we see on the Internet today. Encryption of the packet contents inside the Mixnet thwarts this behavior.

Access and cost

It should by now known to all that Internet access has become one of freedom's material preconditions. It is one of the resources that people need in order to rule themselves in a democracy. A system that allocates this resource solely according to the logic of profit is incapable of providing it to everyone as a matter of right. If profit is the principle that determines how connectivity is distributed, millions will be forced to go without it. Those who cannot afford to pay, or those who live in places that are not profitable enough to invest in are in a Digital Divide. Many more will have only a precarious grasp on it, contingent on the size and regularity of their paychecks. Those who can afford the extortionate fees of the broadband cartel will endure the abysmal speeds and service resultant of chronic underinvestment of those seeking to maximize shareholder investment rather than serve their primary customers.

Alternately, there are publicly owned electric distribution utilities building smart grids. These can be funded by bond issues or federal stimulus grants, with the idea of making the grid more efficient by embedding sensors and other digital devices that monitor the system in real time. Problems could be detected early, which would help reduce outages and improve reliability. The smart grid can also provide the infrastructure to become an Internet Service Provider or ISP. The smart grid running on a fiber-optic network, allows the monitoring devices to communicate, and can run all the way to people's homes as FTH or fiber to the home.

These ISP's can be operated by rural electric or telephone cooperatives, owned, and controlled by their members, and users of their services.

Data Protections and Interoperability

Beyond access and service, we need to solve the data collection, privacy invasion problem. Google remains the apex predator of data theft followed by Facebook, Microsoft, and Apple with their black boxes inside of black boxes inside of black boxes. Billionaires known as Jeff and Mark have become the moral and gender neutral Typhoid Mary's of surveillance capitalism in what can only be described as a Teflon industry, free of any reasonable regulations.

Efforts will also need to be made to resolve the massive inequity problems in the US. As the economy has slowed down, it has also become more unequal. Since the 1970s, the richest .01 percent of Americans have more than quintupled their share of the country's total wealth.

Many believe that monopolies posed a threat to democracy, and that a system of checks and balances is required to disperse corporate power and promote fair competition.

Instead of one Facebook, imagine thousands or millions of social media communities, webs of application streaming audio and video services each with their own rules and customs and cultures. These communities would host different kinds of interactions, as do our current pool halls, libraries, and churches. In common, they are all public spaces, with different purposes, norms, and diversity.

Decentralization facilitates greater diversity but also enables a degree of active democracy. These new social media and streaming communities can become self-governing making their own choices, guided by considerations other than profit. Themselves no longer being forced to let tech executives decide how filtering algorithms work or how content is moderated, behind closed doors and bound by the market.

Just because such communities would be small does not mean they would have to be isolated. Decentralization is not fragmentation. The Internet is currently made up of many distinct networks, and our data travels easily across them because the networks share a common set of protocols. These protocols all need to be open and nonproprietary so that any network can join as long as it follows the specified rules.

Interoperability means that the advantages of network effects can be preserved without the network being owned by any single entity as demonstrated by email. Gmail and Yahoo Mail are distinct services with distinct features, yet users can still exchange messages due to shared protocols.

Returning to the roots of an open Internet

The fact that Internet protocols are open and nonproprietary is a direct consequence of the internet's public origins. Privatization has now pushed things in the opposite direction with online life increasingly takes place within monolithic enclosures where interactions are governed by secret and proprietary algorithms. "Protocolizing" social media and streaming audio and video applications for example, could break the walls of these walled gardens.

Imagine a technical concept sometimes called "adversarial interoperability," where one Internet service communicates with another without the latter's permission, or with grudging permission secured through legislation. Facebook, YouTube, and other monopolies could be made to adopt open protocols that enable other media applications to interconnect. This interaction would be based on socially useful production and not profit.

Creating these new networks that will need to start small and become more robust, will require public investment.

Each one could have a federated social media and streaming server, and anybody with a library card could have an account. Using existing public infrastructure is an excellent way to make new online spaces more accessible, and fasten them to a funding source, while adding a measure of accountability. Libraries have a further advantage: they are full of librarians who are the original information workers. Their job is to retrieve, classify, curate, and contextualize information as a public service, which is needed in online spaces.

The public Mixnet for Web 4.0 will be rolled out in three preliminary phases:

Phase One will involve setting up nodes in most of not all of the nine thousand public libraries in the US.

Phase Two will involve setting up nodes in most of not all of the thirty thousand Post Offices in the US.

Phase Three will involve setting up nodes in most of not all of the three thousand county courthouses in the US.

During this time, the system will be open to add any nonprofit, local government, or community organization nodes. They will need to embrace democratic and participatory values and governance that will have a governing council of immediately recallable delegates, elected by the community. Alternatively, a participatory governance structure that enables community members to directly determine how resources are allocated could be supported.

Where possible, new networks will be planted in existing institutions that already have technical expertise, infrastructure, or relationships with the community. An electric and telephone cooperative that has thousands of member-owners will allow for a better community network than one made from scratch. Municipal governments also have a lot of potential in this regard. Many have already built networks for internal use to lower their telecommunications costs, and have a municipally owned fiber network that serves local government agencies, as well as hundreds of community nonprofits such as health care clinics, homeless shelters, and counseling centers.

The W4 group suspected that once this system had proven itself that it would be adopted worldwide and spur the development of democracies in existing nondemocratic countries.

Like the original Internet, which took a large number of smart, motivated and well intentioned people decades to create and continue to maintain today, the Web 4 group was pleased that they were able to create, with the help of their advisors, the necessary building blocks to reverse the current untenable and dystopian trajectory of the Internet and return it back to its open and public roots.

Afterword
The Statue of Liberty is sailing out to sea

I heard someone on a podcast joke about being a Communist for believing that for-profit healthcare in the US is a bad thing, producing poor results at an excessively high cost. Actually, I believe that he should be placed among the many Democratic Socialist's in this country for having this belief. I personally believe that our grandchildren and their children will be ashamed of us for allowing corporations to profit from the pain and suffering of other people under a system that allows for the maximizing of shareholder value at the expense of our injured, disabled, frail, and elderly.

Democratic Socialism as many are not fully aware of, surrounds us Americans every day from the city, village, town, county, state, and Interstate roads we drive on, the places where we send our children to school, the government buildings we visit for services, the schools and libraries where we check out books, (that are not now banned) the water and sanitation services, the trash and recycling collections, the non-profit agencies that serve the public, non-profit hospitals and elder care facilities, and the postal mail we have delivered to us every day. We provide publically funded (socialist) services to the elderly, handicapped, disabled, and children via Medicare, Medicaid, SSDI, SSI, Social Security, WIC, Supplemental Nutrition or SNAP (@$6 per day), housings FPHA, heating assistance, school lunch and breakfast for children, tribal TANF for historically decimated Native Americans, hospital and medical services for veterans, and Internet connection assistance or ACP.

After seeing the impact of four years of MAGA, the illegalities, the immoral behaviors, the grift and graft, the political corruption, and the coin-operated transactional nature of these people, Americans know exactly what they are voting for. Then you can add to that what Republican local and state legislators have done and continue to do to terrorize and oppress people.

Anyone who now votes for _*any*_ Republican politician exposes themselves as being morally bankrupt in my view.

The Republican Party has become nothing more than a dime store front on a sociopathic, fascist, terrorist organization.

There is so much more, but first some definition of terms from Dictionary.com:

Communist (a person who is regarded as supporting politically leftist or subversive causes) Common in China, N. Korea, Cuba, and Russia.

Very few Americans favor this approach, now or in the past, and those are typically referred to as anarchists. Or in the case of the MAGA/QAnon followers, insurrectionists.

Democratic Socialist (a modified form of socialism, *common in the United States***, achieved by a gradual transition by and under democratic political processes)**

These are largely those who see their government as their only hedge (protection) against the corporate eminent domain and manifest destiny personal data harvesting, surveillance capitalism, environment destroying, and economic warfare (price fixing and gouging) of the vulture capitalist monopolies.

Corporations have become like great vampire squids wrapped around the face of humanity, relentlessly jamming their blood-funnels into anything that smells like profitable personal data, or money.

These Democratic Socialists also believe in halting the privatization of public resources through government and industry collusion. "They want to know how much you will pay for what you used to get for free," sings Tom Petty)

They are however somewhat wary of excessive government power, but also recognize that government has provided the roads for commerce to thrive, rural electrification, urban and rural free mail delivery, weather forecasting, the Internet, investments in green energy solutions, educational grants PELL, and benefits, space exploration funding, agricultural subsidies, job training, housing assistance HUD, Title IX funding, the promotion and enforcement of both civil and human rights, utility funding, death benefits, and many other significant benefits to its citizens and to all of mankind.

1. This is also a government however, who punishes whistleblowers for revealing war crimes, accusing them of having blood on their hands, while not punishing the war criminals who actually do have blood on their hands.
2. A government whose foreign policies include meddling in other countries governments to obtain imperialist powers and ambitions. And then starting wars with lies to profit from the extraction of critical resources.
3. A government who stations young men at nearly 800 military bases in more than 70 countries around the world that ensure the undemocratic government policies and moral decay of those societies. They teach S. Korean soldiers to kill their N. Korean cousins rather than helping them to improve their rice paper houses and open sewers and all the disease and misery that come with that.
4. A government who send young idealistic men and women for foreign countries, to assist with infrastructure projects with the illusion of a corps of peace, only to make them part of a continuing corporate colonization and oppression regime.
5. A government who's FBI historically and consistently violates the privacy of Americans and ignores court required mandates. (300k times just recently) https://www.forbes.com/sites/brianbushard/2023/05/19/fbi-misused-foreign-spy-database-to-target-jan-6-suspects-and-blm-protesters/?sh=6518962867c3
6. A government who's NSA collects "all the data, all the time" from Americans, despite this being against many laws and our Constitutional afforded rights.
7. A government that separates refugee families (without keeping records) and puts refugee babies in cages.
8. A government that provides massive subsidies (corporate welfare to oil companies despite their record profits.
9. A government that now guts the Clean Air and Water Acts of the 1970's.
10. A government whose' FTC, FCC, EPA, and CPA have become feckless and ineffective governmental agencies.

Sociopathic (a person with a psychopathic personality whose behavior is antisocial, often criminal, and who lacks a sense of moral responsibility or social conscience)

These Republicans continue to value property over people. On 9/11, Bush stood on the rubble and said, "the people who knocked these buildings down are going to hear from us". He did not say that that those who killed almost **3000** innocent people are going to hear from us. Property over people. They do not realize or care, nor accept the moral responsibility, that you can rebuild property, but you cannot reincarnate people, or undo the hardships or grief inflicted on their families.

- Republican states have more crime and gun violence per capita
- Republican, of so called Red States with no income tax so that can be *Free from government*, have the worst educational and healthcare systems, highest self-inflicted damages from lack of regulations for health and safety, and the poorest infrastructure in the country. Many would look like Third World countries if not for Federal funding much of it coming from Blue states like New York and California.
- Republican states have had more per capita Covid deaths, like Florida. They also have the lowest vaccination rates (lowest educational attainment) because of no thought to other people, read sociopathic. This can be seen as a perfect example of the intersection point of science and karma.
- They continue to feed the military contractor hogs (despite massive price gouging) at the expense of services for the poor (highest rates of poverty in the developed world).
- They continue to imprison the poor using a systematically racist judicial system (highest rates in the developed world)
- They continue to discriminate against minorities with systematically racist and bigoted, employment, education, housing, and legal systems.
- Their police (KKK derivatives) continue to kill unarmed black men at an unprecedented rate. "Half-cocked excuses for bullet abuses of anyone darker than tan" sings Mike Cooley of the Drive-by Truckers.
- The people gathering at our borders wanting in are not illegals, nor migrants, but are in fact refugees who we are required by law, both National and International, to accept and process. They are refugees escaping the horrific deadly consequences of the CIA meddling in South American and Central American governments, and the historical corruption of these governments. They are refugees escaping the effects of the Climate Crisis, largely created by the US. More will come each and every year, forever.
- They hide behind the flag, and "My country right or wrong" jingo's, and "Proud to be an American" songs, but they don't read the Pentagon Papers, the Iraq and Afghanistan War Logs, to see the duplicitous lies that have killed and continue to kill our young American men, including fifty thousand of my generation in Vietnam. They cheer the militarism of our society including professional sports. "Patriotism is the last refuge of the scoundrel." Samuel Johnson
- The same is true of those who hide behind Evangelical morals, countenance, and reward and support immoral behaviors.

Fascist (a person who is dictatorial or has extreme right-wing views)

- They continue to create discriminatory laws against gays, trans, and other minorities.
- They seek to erase/ change history by banning certain education and books.
- They seek to suppress voting rights by eliminating polling places, reducing days and hours, purging voter lists, Gerrymandering voting districts allowing politicians to pick voters and not the other way around.
- They seek minority rule of the majority and support the cruel and ruthless dictators around the world
- Their Supreme Court _*selected*_ a President in 2000 (draft dodger and later war criminal) though the stoppage of vote counting in the Republican

(brother of the candidate) controlled state of Florida. They did this with a standard majority vote. Hell, most important decisions on the school board I served on required a super majority vote (6 of 9).

- Their current Supreme Court upends settled law, and sends us backward in time, because they cheated to obtain a right wing majority by not honoring Obama's legitimate appointment.
- They plan to scrap birthright US citizenship, in the dying gasp of these mostly male, white dinosaurs.

Terrorist (a person or persons who terrorize or frightens others)

- They pass gun laws that allow anyone to publically carry guns in public, at stores, beaches, movie theaters, and bars.
- They encourage and allow the mentally ill to purchase guns
- They seek to overturn all child labor laws
- They create and then deny responsibility for the homelessness crisis. Creating this problem is bad, but blaming the victims is pure evil.
- They threaten to crash the economy unless the poor sacrifice to the benefit of the rich
- They threaten the IRS budget because they don't want to pay taxes
- They threated the justice system because they don't want to be held accountable for their crimes
- They are willing to sacrifice other people's children being dismembered by military bullets so that they can own machine guns and other man jewelry.
- They all now seem to be gathering in Florida and Texas now, where (in a case of cosmic karma) they will experience the worst gun violence, the worst effects of climate change, from the weather and from the influx of those escaping from further south. They will have their low taxes, but also the worst in the nation schools, roads, and healthcare that naturally comes along with that. These are also _*not*_ safe spaces for racial or gender minorities or even female majorities.

https://www.forbes.com/sites/alangassman/2023/04/07/sunshine-state-becomes-the-firearm-state-floridas-new-permitless-concealed-carry-law/?sh=6f6da820796b
https://www.austintexas.gov/department/open-carry'
https://naacp.org/articles/naacp-issues-travel-advisory-florida
https://www.nea.org/sites/default/files/2022-06/FL Dont Say Gay KYR - Updated2022.06.pdf
https://www.politico.com/news/2023/04/13/florida-6-week-abortion-ban-bill-00091965

To be a Republican politician today is to be anti-government while serving under oath in elected public office. It is to violate, not only their oaths, but also most all of the traditional norms, values, and traditions that have served us well for over 200 years. It is to actively feed and promote the worst of human instincts of cruelty, sadism, tribalism, dishonesty, and malice toward their fellow man. As it stands now, American Capitalism exists as too many people, making too much money, doing too many wrong things.

These Republicans who like to project Alpha Male strength and their disdain for woke ideologies (like climate change, fairness, an understanding of history, and compassion) are in the end just sad, frightened, maladjusted, and weak losers. Ones who need to wear four-inch

shoe lifts to try to stand strong and tall in the eyes of misinformed and duped voters. "Their minds have been mismanaged with great skill." Bob Dylan

The opposite of being woke, is to be asleep to their evil intentions and deeds. Their voters follow those whose heads don't turn with a great deal of velocity, but exhibit real stamina. They have tendency to make a lot of single and two syllable words but are rarely able to herd them toward any discernible meaning other than just another word salad.

Republicans, by and large, run for elected office not for the historic nobility of public service but for the grifted wealth it can provide them, and the power of inflicting the minority views of White Nationalism and Christian Nationalism onto the majority population.

They are by and large empty vessels when it comes to plans and ideas to improve the lives of Americans and enable a more perfect union. In matters of policy they seem to be consistently able to shoot themselves in the foot with impressive accuracy"

We should actually feel sorry for them and get them the mental health counselling that they so badly need. Redemption is a virtue that most of us support.

This is very serious business for the future of our democracy and our civilization.

When the operating system of our democracy, the rule of law, breaks down, things turn animalistic really fast. (i.e. the Jan 6 insurrection)

This is as serious as the Statue of Liberty being towed out into the Atlantic and returned to France, or perhaps sunk in the Mariana Trench in the western Pacific.

Further reading list recommendations

1. Grateful Geek: 50 Years of Apple and Other Tech Adventures Jean-Louis Gassée Kindle Edition
2. The Loop: How Technology Is Creating a World Without Choices and How to Fight Back Jacob Ward Kindle Edition
3. The Gutenberg Parenthesis: The Age of Print and Its Lessons for the Age of the Internet Jeff Jarvis Kindle Edition
4. Guilty of Journalism: The Political Case against Julian Assange Kevin Gosztola, Abby Martin Kindle Edition
5. Smart Until It's Dumb: Why artificial intelligence keeps making epic mistakes (and why the AI bubble will burst) Emmanuel Maggiori Kindle Edition
6. Gates: How Microsoft's Mogul Reinvented an Industry and Made Himself the Richest Man in America Stephen Manes, Paul Andrews Kindle Edition
7. Hackers: Heroes of the Computer Revolution - 25th Anniversary Edition Steven Levy Kindle Edition
8. Red Team Blues: A Martin Hench Novel (The Martin Hench Novels) Cory Doctorow Kindle Edition
9. A Hacker's Mind: How the Powerful Bend Society's Rules, and How to Bend them Back Bruce Schneier Kindle Edition
10. Traffic: Genius, Rivalry, and Delusion in the Billion-Dollar Race to Go Viral Ben Smith Kindle Edition
11. Digital Revolutionaries Who Have Change The World Franz Kafka Kindle Edition
12. I Hate the Internet Jarett Kobek Kindle Edition
13. The Unhackable Internet: How Rebuilding Cyberspace Can Create Real Security and Prevent Financial Collapse Thomas P. Vartanian Kindle Edition
14. Palo Alto: A History of California, Capitalism, and the World Malcolm Harris Kindle Edition
15. My Glorious Defeats: Hacktivist, Narcissist, Anonymous: A Memoir Barrett Brown Kindle Edition

Publishing

As described in previous books, being published is a difficult thing to do. Query letters to literary agents and publishers is the usual route, but is also fraught with inconsistent expectations and nonsensical randomly changing made-up, arbitrary, and capricious to use layer words, rules.

My books remain unpublished as of yet from a traditional book publishing company, despite about 400 submissions, 100 rejections, 200 ignores, and about 80 or so responses of some other kind.

Publishing is after all a nasty business full of pirates selling their dubious wares and posers of all stripes.

Reminds me of this HST quote. He could very well have been speaking of the book publishing or Corporate Internet monopolies.

"The music business is a cruel and shallow money trench, a long plastic hallway where thieves and pimps run free, and good men die like dogs. There's also a negative side."
Hunter S. Thompson

"Publishing is a long game, keep writing and persevering. I wish you nothing but the greatest success."
"Because we're a small press with limited resources, we could not possibly produce such a finely printed and in-color version of the book sent to us. Nonetheless, it's a very ambitious project, and the baseball portions offered appeal."

The hardest part of writing a book is not putting the words on paper, but placing it with the right publisher. We do wish you the very best of luck in finding one who is right.

And then there were the unanticipated reactions:

Hello Writer,
Thank you for submitting your manuscript to Acme Publishing and for your patience as we reviewed your story, which we read with great interest. Although we all liked the concept of your story, unfortunately, we cannot make an offer of publication at this time. Your writing style is impressive, and this is certainly a unique piece. That said, Acme Publishing may not be the best fit in terms of content. We do not have sufficient technical knowledge to assist with this project. Additionally, another publishing company may be able to market your book better.

Dear Writer,
Thank you for your patience in hearing from us about your book. I have unfortunately decided to step aside on representation. My primary reason relates to your platform. Publishers expect authors to have well-developed platforms prior to seeking publication so that they have a built in audience when the book comes out. If a publisher does not believe that the author can sell many thousands of copies on their own, they are averse to taking a project on. This is particularly true of the major NY publishers, whom we pitch to. While I can tell you are doing good work in developing your platform, it still feels a bit early to me to approach NY publishers. I sense that Acme Literary Agency would struggle to find your book a home and for that reason.

Below is a sample query for this book as being a part of a larger trilogy, which was sent, undeterred, to the hundred or so prior queries that had received a response or a rejection. This response or rejection was frequently from a person other than to whom the original query was addressed.

Mr. Joe Blow
Editor
Acme Publishing LTD
Dear Mr. Blow,
I am pitching you a three-volume set of novels. The final volume is nearing completion now. This collection represents my lifetime opus in the form of a bildungsroman extravaganza representing more than ten years of work and fifty years of research and life experience.
These books, as well as this query, will break most book publishing rules by not being traditional, or even suitable for standard print publishing due to cost and complexity. They are also not suitable for Kindle book sausage grinder digital conversion for reasons of quality, style, and complexity, and just as a general principle. PDF files will be the only ascetically and functionally acceptable digital distribution model. These books are:

Book One
- *The Insider (A Life Inside the Personal Computer)*

Approximately 98k words, 350 pages complete
Approximately 125 footnotes, 150 illustrations

Book Two
- *The Cozening (A Murder of Promise)*

Approximately 80k words, 300 pages complete
Approximately 100 footnotes, 200 illustrations.

Book Three
- *The Insider Goes Deep (Tales from the Dark Web)*

Approximately 100k words, 400 pages TBD
Approximately 50 footnotes, 200 illustrations
Approximately 200 CW links and 50 DW links
Approximately 30 Notes

This Insider Goes Deep title is a sequel to the writers' previous two books and follows the continued corruption of computer operating systems and software programs to support the devolution of the original Internet into an individualized predatory surveillance system, corporate ATM, and a global societal menace whose parasitic effects, and predatory behavior threaten lives, freedom, and democracy.

There is now a fourth book as an outgrowth of the extensive research done for the third book, which I see as a companion book:

Book Four
A User Guide To The Dark Web
(The 42nd and Final Encyclopedia Cyberspacia)
Approximately 70k words, 500 pages TBD
Approximately 30 footnotes, 300 illustrations
Approximately 400 CW links and 200 DW links
Approximately 40 Notes

As both a person and as a writer, I have no and have never had any social media presence for both personal and professional reasons which are clearly detailed in the content of these books. Nor do I intend to have any, as this is not relevant to my target demographic.
I have embedded an edgy Prologue excerpt from the third book below for your consideration. I can also forward TOC's or additional content, for each book if you are further interested.

Thank you for your time,

Sincerely,
Prospective Author

Questions for the author

Out of all the corporate monopolies, why did Lefty pick on Charter/Spectrum to write historical fiction about?

Low hanging fruit. Actually as he did not have any choice on his ISP, unlike previous places he had lived, being more rural he was disturbed by the Mbps discrimination there.

Did Lefty accomplish anything from all of the Sturm und Drang?

It remains to be seen, but he feels that he has done his part.

Can one person accomplish anything by doing this?

If you read my second book, and remember that this is historical fiction, *Book Two The Cozening (A Murder of Promise),* Lefty has played the role of Don Quixote previously.

"If you think you are too small to make a difference, try sleeping in a closed room with a mosquito." African Proverb.

Did you listen to music when you wrote this book, and if so what music?

See my playlist in this book.

I burned through and wore out most everything else I have in my record library on the first four books. ☺

Where does the author go from here?

As in most of his life, this author will bypass the straight line and seek a more interesting detour.

I will continue to work telling stories from my technology cave.

Write to the author at lefty at tcw dot org.

The Insider Writer website (tcw.org)

In a Time of Universal Deceit — Telling the Truth Is a Revolutionary Act, and this kind of Courage becomes Contagious

This is where you will find my essays, short stories, and novels.

Readers beware; these essays may interest, inform, enlighten, enrich, amuse you, dispel myths, theories, and speculation, annoy, agitate, anger, infuriate, and even aggravate you with reality.

It seems to me that we are at a time where we are lacking civil reason and factual debate in this county. Our two party political system is supposed to, and previously did, provide for some measure of the exchange of ideas and compromises based in good faith and on a common understanding of verifiable facts. Now we cannot even agree on facts, although just like the study of the sciences, they are a bit stubborn in that facts are not dependent on whether or not you believe them. We seem to be information rich, yet knowledge and wisdom poor. Foresight flows from the latter two, and not the first.

These essays represent knowledge, insights, and expertise gained from experience and based on factual information. The wisdom and foresight parts are up to the reader. You can think of these essays as crib notes for your busy lives. More than anything, I strive to be factual, accurate, sincere, and honest using the scientific method of linking the original source material directly to the essay.

If you take the blue pill, and create and live in your own reality, you will be constantly challenged and confronted by the actuality of and conflicts with the real world around you. These continuous conflicts may lead you to magical thinking, a belief in the false constructs of the supernatural, the coming of a rapture, and the hope of a better afterlife. But this world will ultimately leave you feeling a hopelessness and depression resulting for many in alcoholism, drug addiction, and suicide. The human mind is like a boomerang in that if you throw it too far, it may not come back.

If however you take the red pill as I suggest you do, you will need to actively deal with the complex, dirty, and often confusing and disgusting world around you. This will eventually lead you to the obvious conclusion that you need to become engaged to try to make the world around you a better place in any way you can. This is of course a responsibility you have as a human being, because if you are not here to make the world a better place, then why are you here? To use a metaphor, you cannot feed all the birds during the winter, but you can feed the ones in your backyard. And so can your neighbor and their neighbors and so on.

I know, I know, there is too much out there for you to care about these days. You are being bombarded with information, misinformation, and disinformation. As a result, you now have too many browser tabs open, so to speak. You are being subjected to the theft and misuse of your personal information by dystopian surveillance machines disguised as your personal devices. Your memory is almost full, and your brain computer feels like it is about to crash with a BSoD (Blue Screen of Death). Beyond your currently open tabs for taking care of yourself and your family, in these essays I will give you a few important tabs I think you should keep open...at least for a while.

Glossary

CHARTER COMMUNICATIONS, INC:, is an American telecommunications and mass media company with services branded as Spectrum. With over 32 million customers in 41 states, it is the second-largest cable operator in the United States by subscribers.

INTERNET: a worldwide network of computer networks. The Worldwide Web, SMTP/POP email, SMS, FTP, UseNet, telephony, and file sharing. are all subsets of this actual network of dissimilar, yet connected by common protocols, networks that form the larger Internet.

INTRANET: a geographically localized network of networks. It could be housed within a building, a company, or a local geographic area like a city or metropolitan area.

MEASURING BROADBAND AMERICA: or (MBA) program is an ongoing nationwide performance study of broadband service in the United States that developed out of a recommendation by the National Broadband Plan to improve the availability of information for consumers about their broadband service.

RIPE ATLAS: is a global, open, distributed Internet measurement platform, consisting of thousands of measurement devices that measure Internet connectivity in real time.

SAMKNOWS: is a company seeking to provide impartial and accurate data on how the Internet really performs so that everyone, everywhere, has access to better, more reliable Internet services.

SPECTRUM: Time Warner Cable is a cable telecommunications company that offers a range of home entertainment and information services. Charter Communications, purchased Time Warner Cable and Bright House Networks and now offers its services to consumers and businesses under the branding of Spectrum.

SPECTRUMNET: (a term coined by this author) a network owned by Charter/Spectrum in localized areas of the US. It is advertised and sold as the “Internet” but is in reality just a localized network. It allows them to achieve their advertised speeds in Mbps to localized speedtest.net servers, but mostly not to anywhere else.

THOUSANDEYES, INC: is a network intelligence company that produces software-as-a-service (SaaS) product that uses synthetic monitoring probes to measure network performance. that analyzes the performance of local and wide area networks. Now a division of CISCO.

WEHE: uses your device to exchange Internet traffic recorded from real, popular websites and tell you whether your ISP is giving different performance to different network traffic, which would be a Network Neutrality Violation.

Some Quotes to Live by

- "There can be freedom only when nobody owns it" Jackson Browne
- "In the end, the love you take is equal to the love you make." The Beatles (the last words, on the last song, on the last side, of their last album)
- "Privacy is about people knowing who you are but not knowing what you are doing."
- "Anonymity is about people knowing what you are doing but not knowing who you are."
- "All the knowledge in the world is of no use to fools" Don Henley
- "A man hears what he wants to hear and disregards the rest." Simon & Garfunkel
- “Knowledge will forever govern ignorance, and a people who mean to be their own governors must arm themselves with the power which knowledge gives.”1822, founding father James Madison
- "The human mind is like a boomerang, if you throw it too far, it won't come back" Unknown
- Corporations have become like great vampire squids wrapped around the face of humanity, relentlessly jamming its blood-funnel into anything that smells like resalable personal data.
- The point of modern propaganda isn’t only to misinform or push an agenda. It is to exhaust your critical thinking, to annihilate truth. Garry Kasparov, Twitter, December 13, 2016
- “A time comes when silence is betrayal.” Martin Luther King Jr., “Beyond Vietnam,” a speech delivered at Riverside Church, New York City, April 4, 1967
- “Wherever the people are well-informed, they can be trusted with their own government.” Thomas Jefferson – Paris – 1789
- “Know that every border you cross, every purchase you make, every call you dial, every cell phone tower you pass, friend you keep, article you write, website you visit, email subject line you type, and data packet your router sends, is in the hands of a system whose reach is unlimited but whose safeguards are not. “ NSA whistleblower Edward Snowden’s encrypted email to filmmaker Laura Poitras.
- For once telling the truth has become a crime, while the powerful enjoy impunity, it will be too late to correct the course. We will have surrendered our voice to censorship and our fate to unrestrained tyranny.” UN Rapporteur on Torture Nils Melzer
- "I'd rather have questions that can't be answered than answers that can't be questioned" Dr Richard Feyman's
- “A country without a conscience is a country without a soul, and a country without a soul is a country that cannot survive.” Winston Churchill
- “Truth is treason in the empire of lies.” George Orwell
- "Arguing that you don't care about the right to privacy because you have nothing to hide is no different than saying you don't care about free speech because you have nothing to say." Ed Snowden
- "With Google and Facebook, we have legalized the abuse of the person, through the personal. We have entrenched a system that makes the population vulnerable for the benefit of the privileged. The only way to protect anyone, is to protect everyone." Ed Snowden
- “Nothing in the world is more dangerous than sincere ignorance and conscientious stupidity.” Martin Luther King Jr.

- “An investment in knowledge always pays the best interest.” Ben Franklin
- The distance between governing and ruling is measured in the capacity to exercise power without accountability. The lies matter.— Edward Snowden
- "Good judgment comes from experience. Experience comes from bad judgment."
- "Those who would give up an essential liberty for temporary security, deserve neither liberty nor security." -- Benjamin Franklin
- It is hard to imagine a more stupid or more dangerous way of making decisions than by putting those decisions in the hands of people who pay no price for being wrong. - Thomas Sowell
- "I've never in my entire life seen any evidence that the competitive free market, unrestricted, will ever dispense decent medical care, sanitation, transportation, or education to the people. “educational writer Jonathan Kozol
- “I believe that we are measured not only by how much we love our own children, but also by how much we love other people's children”. Jonathon Kozol
- “An honest man’s pillow is his peace of mind”. John Mellencamp
- "Windows 10/11 equals functional regression" Paul Thurrott
- "We satisfy our endless needs and justify our bloody deeds in the name of destiny, and in the name of God." Don Henley
- “Ed Snowden’s warnings effectively caused the encryption of the Internet” Lefty Insider
- Overall, 53 percent of employees would recommend working at Spectrum to a friend. This is based on 11,751 anonymously submitted reviews on Glassdoor.

So this begs the question as to where you _park_ your HTTPS website?

Thanks for reading,
Lefty Insider
August 2023

Music Play List

From my personal cdrom music library:

1. Drive-by Truckers, The Dirty South
2. Jackson Browne, Downhill from Everywhere
3. The Beatles, Revolver (Remastered)
4. Mark Knopfler, Golden Heart
5. Neil Young, Hitchhiker
6. Neil Young, Homegrown
7. John Mellencamp, Sad Clowns and Hillbillies
8. The Beatles, Past Masters Volumes One and Two
9. The Pacific (Music From the HBO Miniseries)
10. Jackson Rohm, Acoustic Sessions

Since I have a music playlist in each of my books, I thought I would say a word or two about my musical tastes.

I have recently created an micro SD card collection of the .flac songs I have download for my new own personal library collection for use on my Pono player.

For the last ten of so years I have been making a series of "Music Lefty Likes" cd's for playing in the car. This is a level up from that, roughly 500 plus songs covering some 40 plus hours of music and using about 18 gigabytes.

The Beatles Black Album was my first foray into flac files for my Pono player.

This collection represents about 60 years of songs (AC-DC to ZZ Top) that have left an impression on me or touched me in some way. It mostly skips the Beatles because I already have those collections. While not musically talented, I am personally moved by music frequently, and perhaps more than most. Something in the genes I guess.

The SD card is like listening to Sirius Deep Tracks for 40 hours, only better. Unknown versions, extended length versions, and many live versions are there.

This love story ramped up when a friend brought that first Beatles record over to the house to play for us, I was just gob smacked. I bought my first 45 rpm recording from a vending machine at a grocery store within walking distance from our house in Appleton for a dollar. It was Paperback Writer and Rain.

This then continued when I played Beatles (Monkeys, Hendrix) records nonstop as a teenager on the crappy record player with a nickel scotch taped to the tone arm. I got the Yesterday and Today LP for my 13th birthday, but got it home to discover an Al Martino record inside and mom wouldn't let me walk back to exchange it. The delay was intolerable. A couple of years later I got the Penny Lane/Strawberry Fields 45.

Then it was off to when I bought my first real stereo from the PX in Korea in 1972, and used it throughout college, when I replaced all my Beatles LP's with imports for the thicker vinyl and higher quality.

This particular collection starts from the very first song I remember playing by myself on a record player when I was eight-ten or so. I played it over and over again to the point that Mom commented on it. So from Patti Page's "How much is that doggie in the window" though the title song of the first adult movie I saw, To Sir with Love, to all the great music I heard in the Army from guys all over the US, in Missouri, S. Korea, and North Carolina. First heard Elton John, Tumbleweed Connection, Savoy Brown, Santana, Curtis Mayfield, The Faces, Deep Purple, Led Zeppelin, etc. And then all though college with Harry Chapin, Jackson Browne, Robin Trower, Dire Straits, Joe Walsh, etc.

I picked up a love for blues music somewhere along the way, maybe from Savoy Brown and BB King, with lyrics like "just cos you got the blues, don't mean you gotta sing" who wouldn't?

Music to me has always been about melody, harmonies, and intelligent lyrics (with the exception of ZZ Top, grin). I am also a sucker for a Big Band sound, so there is some Brian Setzer and Chicago in there, and I am also fond of the garage band sound, so there is some of that in there as well.

There is just something about the Bo Diddly beat, BB King guitar riffs, Chuck Berry honky-tonk piano licks, and the Tom Petty southern rock groove that move me.

I have seen plenty of music concerts:

- I saw Steely Dan and Chamber Bros. at Fayetteville, NC
- I saw the Bob Hope USO show in S. Korea
- I saw Jackson Browne at NIU DeKalb (with Phoebe Snow) in UofI Champaign/Urbana, the Riverside twice (Piano with the All World Band, and Solo Acoustic) also with David Lindley at the Riverside and again at the Appleton PAC
- I saw Harry Chapin at DeKalb, and Champaign/Urbana
- I saw Robin Trower at the Chicago Auditorium and the Thunder Bay Blues Festival in Ontario, With Dave Knopfler, Mark's brother and Dire Straits band mate.
- I saw John Mellencamp opening act for Heart in Grand Forks ND and in Madison and at the Alliant Energy Center in Madison
- I saw Neil Young at Alpine Valley, the Pabst Theater, and the Riverside
- I saw Mark Knopfler at Northerly Island, the Chicago Theater, and in Madison with Bob Dylan
- I saw Paul McCartney at the Chicago Stadium, the Horizon Center and Milwaukee County Stadium
- I saw Rod Stewart at the United Center in Chicago, and Eric_Guitar_Davis in a Chicago corner bar afterwards
- I saw Jackson Rohm twice at the Wine Not bar in Kenosha
- I saw Tony Bennett at the Riverside in Milwaukee
- I heard but didn't see the Doobie Bros. at the Ravinia venue in Chicago
- I missed Jethro Tull in Minneapolis and George Harrison, Dark Horse Tour, in Chicago and Warren Zevon in Oshkosh

I grew up with the Beatles, from the teenaged boy loves girl stuff, to a fuller awareness of the world around them and songs that reflected that starting with Rubber Soul/Revolver.

The 70's were a time of great music and outstanding FM radio stations with talented DJ's. The 80's were the decade that *the music died*, with some exceptions like Petty, Browne and Young, etc. Most popular music now is mumble rap crap.

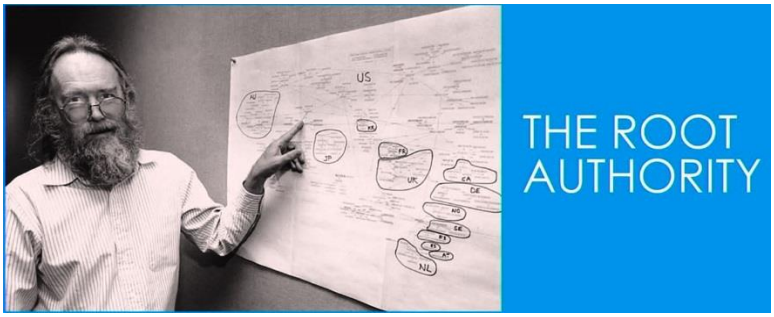
In my second life, I grew up with PC's and the Internet so that is what I write about now.

In the collection there are a couple of Everly Bros. tracks so that I can fully appreciate where the Beatles and Beach Boys harmonies originated, and the Buddy Holly, Elvis, Chuck Berry, Jerry Lee, and Little Richard tracks to hear and appreciate where this rock and roll genre actually came from.

The Heroes of this Generation

WikiLeaker, Julian Assange

IBM's 5150 PC creator Don Estridge, RIP



Internet Domain Name Master, and Internet Elder, Jon Postel, RIP

This could be where your fiber optic cable lives.